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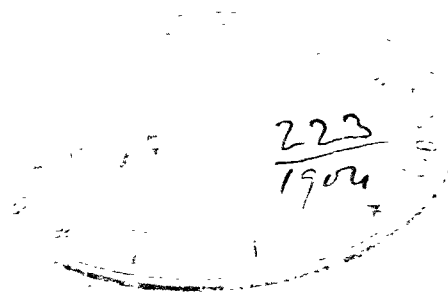
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MONOGRAPH

ON

IVORY CARVING

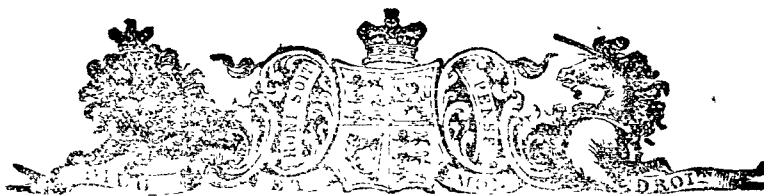
IN THE

PUNJAB,

1900.

Published by Authority.

736.62095442



Lahore:

THE "CIVIL AND MILITARY GAZETTE" PRESS,

Contractors to the Punjab Government.

1907.

NO. 1190.

FROM

A. H. DIACK, ESQUIRE,
*Revenue and Financial Secretary to Government,
Punjab and its Dependencies,*

TO

THE JUNIOR SECRETARY TO THE FINANCIAL
COMMISSIONER, PUNJAB.

Dated Lahore, 19th December 1900.

File No. 2.

Revenue and Agriculture.

General.

SIR,

IN acknowledging the receipt of your letter No. 876, dated the 5th of November 1900, forwarding a Monograph on Ivory Carving in the Punjab, compiled by Mr. T. P. Ellis, Assistant Commissioner, I am directed to say that the Lieutenant-Governor agrees with the Financial Commissioner that Mr. Ellis deserves credit for his method of treating the subject and for his thorough investigation of it.

I have, &c.,

A. H. DIACK,

Revenue and Finl. Secy. to Govt., Punjab.

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No. 876.

FINANCIAL COMMISSIONER'S OFFICE,

Dated LAHORE, the 5th November 1900.

FROM

A. H. GRANT, ESQUIRE, C.S.,
Junior Secretary to the Financial Commissioner, Punjab,

TO

A. H. DIACK, ESQUIRE, C.S.,
Revenue and Financial Secretary to Government, Punjab.

SIR,

In compliance with your endorsement No. 915, dated 21st October 1899, forwarding a circular from the Government of India specifying 'Ivory Carving' as the subject chosen for the Industrial Monograph for 1899-1900, I am directed to forward a Monograph on this industry, prepared by Mr. T. P. Ellis, Assistant Commissioner, and to convey the following remarks of the Financial Commissioner.

2. The work of preparing the Monograph was specially entrusted last autumn to Mr. Ellis, because at that time he was posted as Assistant Commissioner at Delhi, the most important centre of the 'ivory carving' industry in the Province, and therefore the locality where special facilities existed for the collection of the required facts. That the Monograph could not be submitted by the required date (October 1st) is due partly to delay in the submission of District reports to Mr. Ellis, and partly to the long time required for the reproduction of some of the illustrations.

3. Mr. Ellis has arranged his Monograph clearly and carefully. In Chapter I he divides the industry into three heads :—

- I.—Carving.
- II.—Inlaying.
- III.—Turning.

Although the last two heads are not, strictly speaking, 'carving' at all: yet Mr. Ellis has very rightly resolved to consider them equally with 'ivory carving' proper; and his Monograph is consequently a comprehensive account of the whole ivory industry of the Province.

4. In Chapter II Mr. Ellis has reviewed briefly the history of the various branches of the industry. The art of ivory carving is doubtless very old in India. The absence of any living tradition of its antiquity in the Punjab is due to the displacement of the old Hindu kingdoms by the Delhi Empire. With Sikh rule revived the open tolerance of arts that imitate objects of nature.

5. Chapter III deals with the material. It appears that for purposes of carving the ivory of the African and Burma elephant is greatly preferred to that of the elephant of India proper. The ivory workers do not, however, now trade direct with Africa or Burma, but obtain their supplies through the large dealers at Calcutta and Bombay.

6. In Chapter IV Mr. Ellis discusses the chief localities of the industry. Delhi and Amritsar are the centres of ivory carving proper; Amritsar, Dera Gházi Khan, Gujránwála, Multan and Lahore of bangle-turning; Hoshiárpur of inlaying, and Ludhiána of billiard ball turning.

7. The Chapter on workers and dealers (V) is interesting, particularly the accounts of the respective stages of training and education through which

the young ivory carver has to pass at Delhi and Amritsar. The account of the various tools used is also noteworthy. As a rule, it appears, the ordinary ivory worker at Delhi and Amritsar gets a monthly wage instead of a share in the profits from the master-craftsmen according to his merits, varying in Delhi from Rs. 5 to Rs. 50 *per mensem* and in Amritsar from Rs. 8 to Rs. 18. The average profits of the masters themselves must remain extremely doubtful. Mr. Tupper would hesitate to accept Rs. 5 to Rs. 10 per cent. on the outlay as a satisfactory estimate of Lāla Faquir Chand's gains for this branch of his profession.

8. In discussing the work and its prospects in Chapter VI Mr. Ellis very truly points out the artistic inferiority of the figure or model carving to perforation and tracery. Except for a certain quaintness of conception and unquestionable industry of execution there is little to commend the figure of either man or beast as carved in ivory by the Indian craftsman to the artistic sense. With the ivory tracery, however, the case is very different. The reproduction, time after time, of the same design without the least discrepancy (paragraph 41 of the Monograph) affords some analogy to another mental capacity very conspicuous in this country, *viz.*, extreme accuracy in rhythm, combined with the apparent absence of all feeling for what we regard as melody.

9. There can be no question that the ivory industry in the Punjab which Mr. Lockwood Kipling, twenty years ago, described as at a low ebb, is destined still further to decline, for the reasons given in paragraphs 44 and 45 of the Monograph. Mr. Tupper does not think that any action on the part of Government could be usefully taken to check the decline.

10. In conclusion I am to say that, in the Financial Commissioner's opinion, Mr. Ellis has prepared an interesting and useful Monograph. He has dealt with the subject comprehensively, and deserves credit for the industry he has shown in eliciting many facts which could have only been obtained by diligent personal enquiries from the workers themselves.

I have, &c.,

A. H. GRANT,

Junior Secy. to the Financial Commissioner, Punjab.

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MONOGRAPH

ON

IVORY CARVING IN THE PUNJAB.

I.—SCOPE AND INTRODUCTORY.

1. The preparation of this Monograph on the Ivory Industry in the Punjab has laboured under two disadvantages, *viz.*, a lack of personal knowledge of the subject, and the difficulty experienced in obtaining anything but the very scantiest details of the work as carried on in the several districts of the Province.

2. The Ivory Industry falls under three heads :—

I.—Ivory carving proper.

II.—In-laying.

III.—Turning.

The first named is conducted only in two districts of the Province Delhi and Amritsar, and in the Native State of Patiala.

In-laying, on the other hand, is in a flourishing condition in Hoshiarpur, and prevails to some extent in Dera Ismail Khan, and though returns are not available in the District reports received, there is little doubt it is carried on to a minor degree in every district in which there is a demand for decorative furniture, though in the majority of such districts the ordinary medium is of a different nature.

Turning, which includes the manufacture of bracelets, *surmadánis*—small cells of varying shape and pattern used for holding the *surma* or antimony with which the women of the country are wont to darken their eyelashes—and billiard-balls, finds a place in practically every town of any importance in the Province, at least so far as the making of *chúras* is concerned, and particularly in Lahore, Gujranwála, Dera Ismail Khan, Dera Gházi Khan, Mooltan, and Ludhiána.

Though these branches of the trade are distinct, and the two last named cannot strictly be regarded as carving, I have taken the instructions received to imply that they should all be touched upon.

The three industries themselves are, however, of such minor importance, proceed so much on the same lines wherever existing, and the information furnished has been so inadequate, that the material contained in the Monograph must necessarily appear slight.

How very minute is the Ivory Industry in the Punjab may be gathered from the fact that Mr. Baden-Powell in his book on Punjab manufactures dismisses the subject in some four pages.

At the time of his writing he states that the industry is conducted only in Delhi, Amritsar, Umballa, Ludhiána, Patiala and Lahore. If this was intended to apply to ivory carving proper alone the list is too extensive for the facts of to-day, while if it was meant to include the allied industries of in-laying and turning to those should be added the names of Dera Gházi Khan, Dera Ismail Khan, Gujrat, Gujranwála, Hoshiarpur and Mooltan.

A circular was addressed to these and other districts, from which a negative answer was received, with the exception of Delhi, in which station the compiler was posted, asking for information on the following points—

I.—History of the Industry ;

II.—Source, class, and cost of raw material ;

III.—Places in which work is done in the district ;

IV.—The workers—

- (a) caste, numbers, whether hereditary or not ;
- (b) notes on training ;
- (c) system of working ;
- (d) tools ;
- (e) rate of pay.

V.—The masters and sellers—

- (a) profits ;
- (b) organization and distribution ;
- (c) names of master craftsmen.

VI.—The work—

- (a) if carried on in conjunction with other work, *e. g.*, miniature painting ;
- (b) class of work, --carving, in-laying, or turning ;
- (c) specimens of work ;
- (d) usual designs, price of work ;
- (e) notes on character of work.

VII.—Prospects.

And though in the reports received these points are not all touched upon, it will be better to adopt this arrangement as far as possible in the text of the Monograph, embodying each District Report therein with such additional information as has been derived from other sources.

3. Some assistance has been afforded in the preparation of the Monograph by Lāla Danpat Rāi of the Mayo School of Art, Lahore, while of the District reports the only ones of any value are those of Sardār Ali Hussain of Hoshiār-pur and of the Secretary of the Amritsar Municipality.

II.—HISTORY OF THE INDUSTRY.

4. Ivory carving is probably one of the oldest of Indian arts, but of its existence in early history there are neither facts nor fables to prove much.

In a country itself one of the world's suppliers of ivory and from time immemorial known for the skill and patience of its artists, it is not an unwarrantable assumption that the art was known and cultivated from early times. That work of a sort in ivory was practised in India prior to the Mussalman invasions is certain from the fact that the oldest specimen of chessmen contained in the South Kensington Museum is a set discovered nearly 50 years ago during some excavations on the site of the city of Brahminabad in Sind, which was destroyed by an earthquake early in the VIIIth century.

The pieces are described as turned, plain in character, and without ornament. The chessmen and squares of the boards are black and white, alternate ivory and ebony, the pieces varying in height from one to two inches.

5. The history of the art so far as it concerns the Punjab is, however, of quite modern date.

No early travels or descriptions of the Mughal Court that I have yet seen refer to the encouragement of this particular art : of its existence in Delhi in early times there are no traces ; and tradition assigns to it no earlier date than last century.

The family of Lāla Faqir Chand, the present conductor of the works in the Dariba, appears to have commenced work some four generations ago, but the oldest specimen of work, that of an exquisitely carved Hindu pantheon, dates from only 50 or 60 years ago. (Since writing the above I learn that the piece has at length found a purchaser).

Since the establishment of the works in Delhi, they have been continuously carried on by the family which originally commenced them, and undoubtedly the best work that the Province is able to show is produced here.

6. In Hoshiárpur the in-laying trade is of an ancient date, prior to the British Ráj, in which times it was patronized by the Nawábs and Rájahs.

Máhárajah Ranjít Singh is credited with having employed the services of Hoshiárpur workmen in in-laying with ivory some of the wood-work of the Golden Temple at Amritsar, and other buildings in Lahore and different parts of his kingdom.

But under native rule the number of workmen was limited. The Hoshiárpur trade has received a great stimulus under the British Government from Anglo-Indian residents and travellers, and one of the results has been large exportations to America, England and the Continent, where the work competes not unfavourably with the best work of China.

Of late years the designs and specimens have improved, and the numbers afforded employment have increased rapidly.

Formerly in-laying was confined to small boxes used by natives, sticks, *chukis*, *takhts*, shoes, and *chúrpaís*, while at present there is hardly an article of European furniture, tables, chairs, mirrors, easels, picture frames, photograph stands, side-boards, hat-racks, glove-boxes, etc., etc., which is not used for decorative purposes.

This departure is largely due to Mr. Coldstream, C.S., who displayed great interest in the encouragement of the work, and who is understood to have contemplated the founding of a technical school, more in the hope of improving designs than of increasing the output or the numbers of the workers.

7. Patiala has been a centre of ivory carving for several generations, the late Máhárajah being especially a munificent patron, keeping in his own employ an experienced workman whose works amongst other specimens in his collections he exhibited at the various Exhibitions in Lahore and Calcutta.

8. The art of turning *chúras* or bangles must also be of considerable antiquity. In several districts the wearing of *chúras* of ivory is indispensable to women of both the Hindu and Mussalman faiths on the occasion of marriage festivities. In connection with this custom there is an interesting usage. No girl is supposed to wear such an ornament prior to her wedding-day, on which occasion it is the inviolable duty of the bride's *mámu* or maternal uncle to present her with one.

Subsequently to the marriage it is customary for the girl to lay aside her ivory *chúras*, in much the same way as the English bride disposes of her wedding garments, and to replace them with silver ones for common use.

The custom is, however, not universal, and it is not uncommon in certain parts of the Province to see *chúras* being worn by others than brides.

It is unfortunate that the wearing of *chúras* is not as general as it formerly was, for owing to the cheapness of silver and the facility afforded by the presence of the *sunár* in every bazaar, its place is being taken by bangles of that metal amongst the better-off, whilst among the poorer classes coloured glass and wood supplies the want.

Of late years a departure has taken place in the character of the *chúras* worn, illustrating an advance in taste: whereas formerly they were invariably painted either plainly or with some crude design, fashion now lays down that they are to be worn in the natural colour, and an old set of *chúras* fetches only about two-thirds the price of a modern uncoloured one.

9. The turning of billiard-balls, which is confined to Ludhiána, is, of course, quite modern in origin; the trade in India is small, owing to climatic conditions rendering the use of benzoline or composite balls more advisable, and what trade there is in this article is mostly export, when it has to compete with European firms which have the advantage of using material already seasoned to the climate of the market.

10. Some interesting facts are forthcoming regarding the industry from the various catalogues of different Industrial Exhibitions, held from time to time in Calcutta and Lahore.

In the Punjab Section of the Calcutta Exhibition of 1864, 375 articles were exhibited from Umballa, Amritsar, Dera Gházi Khan, Gujranwála, Hoshiárpur, Jullundur, Kángra, Lahore, Ludhiána, Patiála, Shahpur, Simla, and Sirsa, consisting mostly of figures, boxes, chessmen, knives, combs, handles, and bracelets; Delhi, the present centre of the trade, being conspicuously absent. The workers chosen for special recommendation being Panah of Ludhiána, Khuda Bakhsh of Lahore, Devi Sahai-Chamba Mal of Amritsar and the ivory-carver specially employed by His Highness the Mahárajah of Patiála.

At the Punjab Exhibition of 1881-82, only 111 articles were shown drawn from Delhi, Lahore, Umballa, Ludhiána, Amritsar, Mooltan, Shahpur, Gujranwála, Hoshiárpur, and the inlayers of Basi Ghulám Hussain.

The Calcutta Exhibition of 1883 shows an advance in numbers, namely, 101 inlaid articles and 66 specimens of carving, but the exhibitors were fewer comprising only Faqir Chand of Delhi, Devi Sahai-Chamba Mal of Amritsar, His Highness the Rájah of Nábha, His Highness the Mahárajah of Patiála, Kanhiya Lál of Hoshiárpur, and Gondu and Gangu of the same district.

Mr. Lockwood Kipling, one of the secretaries, then wrote:—

“Ivory carving is not an art that flourishes in the Punjab. At Amritsar great quantities of combs are made, an industry which probably originated with the Sikhs who are *Nazarenes* in the treatment of their hair and beard. The ivory combs, paper-cutters, and card cases of Amritsar are ornamented with geometrical open-work patterns of some delicacy of execution, but no great interest in design. Figure work is but seldom wrought in this Province owing to the predominance of Mussalman notions, and the only figure carver of Delhi, Faqir Chand, does not appear to meet with much encouragement.”

This *resumé* of the art as it existed 20 years ago, is true with but slight alterations of the industry of to-day. There has been since then an advance in one direction and a decline in another. Ivory carving has improved in Delhi and in-laying in Hoshiárpur, but in Patiála and Amritsar the industry has fallen on evil days.

III.—THE MATERIAL.

11. The ivory used in India is drawn from three sources, *viz.*, Africa, Burma and India itself. Burmese ivory does not seem to be used to any appreciable extent in the Punjab, and Indian ivory is at a discount. In comparison with the African article the latter is inferior. The former when cut is of a warm transparent tint, with no appreciable appearance of grain, as it dries through exposure, the oil evaporates and the ivory itself grows lighter in colour. Indian ivory, on the other hand, when cut appears more like long exposed African, and has a tendency in time to assume a pale yellowish tint. The former is considerably harder, closer in texture and easier to polish, the lack of polish being one of the best criteria to judge whether an article is made of African or Indian ivory.

The opinion of experts on the quality of Indian ivory appears to be that its inferiority is due to the food almost entirely.

Lála Faqir Chand states that possibly the fact that so many of the animals in India are owned by Rájahs who regale them partly with sweetmeats accounts for the softness.

Mr. Baden-Powell has written:—

“The ivory with which these carvings are executed is obtained from the tusks of wild elephants. The natives say that the tusks of domesticated elephants yields a brittle and inferior ivory liable to crack on exposure to air. My informant further asserts that the cause of the brittleness of the tusk of the domesticated animal is the salt that is given with its food.”

As a matter of fact, the wild elephant in India affords but little material to the Punjab, the Tirai in Oudh alone is capable of furnishing any quantity, and that is a source which is but slightly drawn upon.

The reasons, therefore, of the inferiority of Indian ivory are probably partly the surroundings of the animals, domestication and unsuitable food causing deterioration, partly climatic, and most of all an inferiority in breed.

12. The ordinary African ivory which is used in Delhi is mostly bought in Bombay, and costs in the block 20 to 24 rupees per sér (2 lbs.), the best Indian ivory is usually charged for at the rate of Rs. 16, and inferior ivory of both classes, costing anything from Rs. 4 to 10 is obtained from Amritsar, and used by the children who are undergoing training, and for coarser and cheaper work.

The same prices range in Patiala where the purchasers buy in two markets, Bombay for large quantities, Amritsar for small.

The prices in Dera Gházi Khan, due possibly to the distance from the markets, run a little higher when it be borne in mind that the best ivory is not in common use. The ivory is divided into three classes, roughly corresponding with definite qualities:—

I.—Mirzapuri	(Burmese)	Rs. 20 per sér.
	(Hindu)	„ 16 „
II.—Surti	African	„ 20 „
III.—Kamboti	Indian	„ 18 „

Ludhiána and Jagráon derive their supplies from Burma, South Africa, Zanzibar and England at rates varying from Rs. 10 to 5 per sér, this, of course, being far from the best quality.

In Amritsar, where the trade has during the last few years seriously diminished, the manufacturers in present times do not go direct to Burma, Africa or Nepál for their material—whether they ever had any trade relations with these places is not clear, though there is a general impression that in past times the leading carvers imported their own ivory. Both employers and special artisans in ivory and “artisan proprietors” now import the raw material either from Calcutta or Bombay, this they divide into three classes according to the original source:—

- I.—*Parbi*, that which comes from the East, whether from Burma or Nepál.
- II.—*Surti*, which embraces importations from Bombay other than
- III.—*Zanzibari*, a term used to differentiate the ivory of Zanzibar from that of the rest of Africa.

The best specimens come from Africa and Burma, and are chiefly employed in the manufacture of *chóris*, the Indian ivory, so full of flaws and cracks as it is, being useless for that purpose. Perfect samples from India are, however, sometimes obtainable, but whether these are then prized more than Burmese or African produce is not clear.

The prices appear to range from Rs. 6 to Rs. 16 per sér.

Amritsar is also a fairly considerable depot for the distribution of ivory throughout the Punjab, most of the towns where bangle-turning is carried on in a small way indenting on this centre for their supplies. The quality, however, of the ivory imported by the Amritsar traders appears to be somewhat inferior to that used by Lála Faqír Chand of Delhi, due, no doubt, to the less ambitious work attempted.

Mooltan, like the other centres, derives its ivory from Bombay, Calcutta and Amritsar in the rough tusk, and the classification adopted is apparently not geographical, but according to the immediate market at which it is bought. The rough tusk after importation in bulk, is rounded off; the circular piece is denominated *nag* and the remnant, including the taimercut of the tusk as well as the interior, is called *batia*.

The ivory imported from Calcutta (Mirzapuri) is esteemed the better quality being whiter than Bombay, (though this, I am inclined to believe, from what is the general impression left from information obtained from other sources and the explicit statements of those who know best, is very far from

being true I give the idea of the Mooltanis for what it is worth), commanding as *nag* Rs 22 per sér, while that of Bombay is purchasable at Rs. 20; the *gattia* from both markets realizing Rs. 6 to 8. Before using the *nag* is further strengthened by the addition of wax to prevent its bursting.

Hoshiárpur is supplied from Jullundur and Amritsar, as they are within easy and inexpensive reach, the individual workers being poor as a rule contenting themselves with procuring material from the nearest market.

A cheap quality of ivory is preferred as it is used only for in-laying, principally refuse after the turning of bracelets, and the inner brittle portion of the tusk. To some extent camel-bone is also used by the in-layers of Hoshiárpur, and except to the expert it is in inlaid work difficult to detect the difference, it is, however, more perishable and liable to decay, and quickly loses its gloss and brilliancy, though by polishing it can be temporarily restored.

In addition, *chukri*, a kind of white wood, bearing a superficial resemblance to inferior ivory when new and polished, and costing about 2 annas per sér, is used either as a ground-work or an alternative to ivory.

Hoshiárpur ivory costs from 8 annas to Rs. 5 per sér, the workers themselves are ignorant of the distinction between the Indian and African qualities.

Lahore is supplied from Zanzibar, *via* Amritsar, Bombay and Calcutta, and the ivory tusk is on sale in the district at Lahore, Chánuán and Kasúr, at the shops of Sheo Likhan Mal, Moti Rám and Rám Diyál. Bombay ivory ranges from Rs. 15 to Rs. 16 per sér and Calcutta from Rs. 19 to 20.

IV.—LOCALITY OF WORK.

13. Except in very few instances the ivory industry is confined to the large towns. The reason is not far to seek: from its nature it is not wide-spread, it is an art that appeals to a very limited circle, and to command a sale, the purchasers being almost exclusively European, it is necessary that the work should be conducted near a centre frequented by them. The only exception to this is in the industry of bangle-turning which, as previously remarked, is carried on to some extent in every large town in the Province.

Ivory carving proper is confined to three cities, Delhi and Amritsar in British territory and in the capital of the Patiala State. In the former city Lála Faqír Chand of the Dariba practically monopolises the trade, and in fact, there is no one in the Province who can in any way compete with him.

Lála Moti Ram of the Cháundni Chowk employs a few men, but the work done is inconsiderable, and Mr. Tellery, the well-known dealer in Indian *curios*, formerly employed some, but finding their products of an inferior quality he is now supplied direct by Lála Faqír Chand.

In Amritsar the quarter, known as the 'Darsheni Darwaza', contains nearly, if not all, the workers in ornamental products and the manufacture of toys, while the *chúrigars* or bangle-makers live and work in the 'Katra Mohr Singh.'

The following are the craftsmen in Amritsar:—

I.—In perforation and in-lay-work.

Bháí Natha Singh.
Bháí Híra Singh.
Bháí Deva Singh.
Bháí Mangal Singh.

II.—In combs, surmídánts, &c.

Bháí Sardúl Singh.
Bháí Ganga Singh.
Bháí Chúr Singh.

III.—Toys and figure-carving.

Bháí Karm Singh.

IV.—*Bangle and chura-turning.*

Gujar,
Wali Muhammad,
Híra,

and in the allied trade of miniature painting on ivory—

Bhai Kapúr Singh.

In Patiála there are only three workmen, Mussalman in religion by name Muhammad Bakhsh, Mirza Mani and Ali Bakhsh, employed to a very large degree by His Highness the Mahárájah, they living at the capital.

14. Bangle-turning though general throughout the Province has its chief centres in the Amritsar, Dera Gházi Khan, Gujránwála, Mooltan and Lahore districts.

The bangle-turners of Amritsar have been mentioned above.

Some of the best workers are those of Dera Gházi Khan, all of whom reside in head-quarters, the best known being Abdul Karím, Kádir Bakhsh, Abdul Rahím, Ghulám Hussain, Allah Bakhsh, Haidar Ramzan, Kora, Wali, Akmad, Sahab and Waraya.

In Gujránwála bracelets are made at Sadr, Wazírabad and Rámnagar, the most important merchant being at Gujránwála itself, he importing about Rs. 1,500 worth of ivory each year, so his trade must be of considerable extent.

The supply of *chúras* is in the hands of five workmen, who have three shops between them. At Wazírabad and Rámnagar there are only two workmen, one at each place. These men are occasionally employed in making *surmadúnís* and small buttons.

In Mooltan and Dera Ismail Khan the workers have some local repute, and Lahore, in addition to having a few shops, where ivory goods are to be bought, has four craftsmen of some skill in turning, all resident in the Dabbi Bazaar, by name Kádir Bakhsh, Ali Bakhsh, Nabi Bakhsh and Buddha.

15. The great centre of in-laying work is the district of Hoshiárpur. Amritsar has a certain amount, and during the summer months some of the in-layers of Hoshiárpur locate themselves at Simla, charging double prices for the privilege of purchasing there. A little is done in Dera Ismail Khan, more of the nature of embossment than in-laying, and Mauza Phália, in the Gujrát district, possesses a few artisans who occasionally engage themselves in in-laying *charkhás* or spinning-wheels.

In Hoshiárpur, the four centres are Hoshiárpur, Par Hiran, Khuáspur and Basi Ghulám Hussain, the first named being rather a depôt and the last named being famous not only in India, but even throughout Europe and America, the best known workers being Atma Rám, Gangu, Basant Rám and Naman, while Maya of Khuáspur has also considerable repute.

16. The turning of billiard-balls is confined to the Ludhiána district, Ludhiána city and Jagráon being the two places where the industry in conjunction with that of bangle making is conducted. In the former city Kádir Bakhsh, Nízám-ud-dín, Ganda, Ghisu, Sadu and Gul Sher are the best-known, and in the latter the two Jhandás, Bulanda, Híra, Umar Dín, Gaindu, Faizu, Faqír Muhammad and Khuda Bakhsh.

V.—THE WORKERS AND DEALERS.

17. In the shop of Lála Faqír Chand of Delhi about 20 men are employed in all, the majority of whom are Brahmins, though the art is by no means confined to a particular caste or religion. Ivory carving in Delhi almost exclusively hereditary, the system of training being long and arduous, which tends to the limiting of the acquisition of the art to families.

18. The training of the would-be artist commences at an early age usually when the boy is about 10 or 12 years of age. For about four years the pupil is taught free-hand drawing by the head-carver, or in some cases by his own father, his apparatus consisting of a slate and pencil, or chalk, and his sketches

being largely figures of animals, *e.g.*, dogs, camels, and floral designs, advancing in difficulty as the youth attains to skill. From free-hand drawing the pupil advances to model drawing, using as his models some of the ivory figures executed by the workmen in the shop. Some of the sketches, which I saw drawn by the only present pupil—a lad of 11—were of excellent quality. After the learner has attained proficiency in this first step he is given a file and a rough block of coarse ivory, and he proceeds to learn how to smoothe the ivory, and render it fit for the next process at the hands of more experienced workers.

He is kept at this work for from 2 to 2½ years, at the expiration of which term he is initiated into the art of sketching on the smoothed ivory with a lead pencil, reproducing on the ivory the same designs he learnt to draw on slate. From this he proceeds to delineate on the surface of the ivory the lines on which a full figure will be carved,—this work employs him for 1 to 1½ year. When he has succeeded in adapting himself to his new material he is provided with a piece of inferior ivory and instructed in the art of filing his figures on the surface. He is then gradually taught to pass from surface to block figures, and when he has attained to proficiency in the latter he passes on to the most difficult art of all, that of perforation, beginning first with coarse work and gradually attaining to the finest qualities until at length he is able to turn out a beautiful figure richly adorned with tracery and perforated trappings.

A good deal naturally depends on the individual himself in the progress he makes, but even with the advantages of hereditary instinct, application and natural gifts it requires a period of 20 to 25 years of careful training before a workman can be trusted and considered proficient in all branches of his art.

19. The workers in Delhi are nearly all organized under Lāla Faqīr Chand, taking up the trade from father to son as the master craftsman himself the hereditary calling.

There are, as far as I have been able to discover, no individual workmen in Delhi; there appear at some time to have been a few, but their work was always inferior and their efforts short-lived; they were probably too poor to purchase the best class of ivory or to pass as is necessary over a perfect specimen months, if not years, without receiving payment. The capitalist is in default of the patron a necessity for the best work to be produced.

As it is, the master craftsman employs his carvers at a fixed wage varying according to the capabilities of the workman, supplies him with the material and sets the task, he himself taking the risk of sale, of the destruction of the material, and the long period of waiting before a return is made for the outlay.

The factory of Lāla Faqīr Chand is above the ivory shop in the Darība: the workers are congregated in a small room along with the wood-carvers and the miniature painters, some sit on the balcony, some on the stairs, some by open doors and lattices, wherever they can obtain sufficient light to work by, surrounded by their primitive implements, the whole forming a typical scene of the Indian artist at work, the surroundings in which his work is done containing everything calculated to make the work difficult, and the result being exquisite.

20. The wage of the workers varies from that of the lowest grade earning some Rs. 5 a month to that of the best workman in the shop with his Rs. 50. Of course the apprentice is paid nothing until he is of sufficient skill to turn out a saleable article. Thus he is able to do in from five to seven years, and the first wage for such employé rarely exceeds 1 rupee a month.

It is only the superior workmen who are entrusted with the better class of work, some pieces represent the labour of 2, 3 or even 4 years, and at the last moment a slight slip of an instrument, a careless movement of the hand in perforating may ruin the toil of months, besides rendering valueless the precious ivory itself.

21. The tools employed are to European eyes of a decidedly primitive character, and it is a matter of more than ordinary surprise that such perfect work is produced by such inadequate means.

Sketches of the tools employed in Delhi are annexed in the appendix (Illustration No. 1).

The illustration shows 38 different tools :—

- 1, 2, 3, the *ári* or saw used for cutting through the bark of rough tusk ; for cutting off the bark, and for the final cutting into the required sizes, respectively.
- 4, the *kenchi* or cutters or splitters, used for cutting fine thin sheets of ivory into strips.
- 5, the *chhuri* or paring knife, used in preparing the work for carving ; sizes various according to whether the paring to be done is fine or heavy.
- 6, the *chhuri* or finishing knife, used in preparing the work for turning and rounding off edges.
- 7, the *sohan* or file, used for finished large work only.
- 8, the *sohan* or rasp, for finishing the rough edges of holes.
- 9, a flat rasp for square rough work only.
- 10—16, *birkas* or chisels, for small grooves.
- 15, used in place of our gauge.
- 17—18, groovers used in clearing small grooved work.
- 19—24, assorted files and rasps, *sohan* and *chauras*.
- 25—29, assorted drills or *barmás*.
- 30—34, points and punches, used for clearing work from dust after polishing.
- 35—38, rabbetting planes, *randa*, used for ornamental work round bases or stands, also for beadings, and last of all chalk for polishing the finished article.

The whole of the work is done on the factory under the direct supervision of the head-worker, and no one is allowed to do work at his own home, the finished product in every case being the master's.

22. The profit of the master craftsman varies, on the one side that of expenditure there is the cost of ivory tools, the pay of the workmen extending sometimes over several months while a piece is being prepared, and the frequent delay in selling the articles produced ; for instance there was until recently in Lāla Faqír Chand's shop a beautiful carving of some Hindu gods which was executed some 50 years ago, and which was valued at Rs. 2,500.

On the other hand, an expensive article is sold, good orders may come in from a wealthy patron (in the winter of 1899 one specimen was sold for the remunerative figure of Rs. 8,000—£500) so that an average fair rate of profit can only be with difficulty ascertained. They are not extensive, and may be safely, according to Lāla Faqír Chand's estimate, assessed at from 5 per cent. to 10 per cent. on the original outlay, which in view of the profits obtained in other Indian industries is but a very slight return.

Lāla Faqír Chand has his own shop in the Daríba, where the productions of his men are sold, and he also practically supplies the whole of the jewellers in the Chāndni Chowk, who sell partly on commission and partly after purchase, but the best class of work is obtainable at the manufacturer's own shop.

The comparative inadequacy of the profits on ivory carving, no doubt, injures the production of highly priced articles, and the risk of a considerable outlay producing no return unless a special order has been placed, added to the desire of obtaining cheap specimens, result in a large quantity of small and therefore cheap objects being manufactured.

It should, however, be noted that the greatest skill is devoted to the production of specially ordered goods, and it is amongst them that the best specimens are to be found.

23. The organization of the workers in Amritsar has many important differences. As far as this city is concerned the workers may be divided into two classes:—

I.—Those employed in bangle-making.

II.—Those who are engaged in the manufacture of toys, figures, and ordinary useful articles such as combs, paper-knives, *surnadánís*, card-cases, boxes of sorts, and who prepare the geometrical and floral designs for in-lay work in wood or metal.

Some of these latter restrict their operations, as a rule, to toys or inlaid work, occasionally, when trade is slack, turning their attention to other kinds saving only the cutting and turning of bracelets.

There are three castes engaged in the trade—

(a) the workers in ornamental productions who are called *Rámgaríás*, or *tarkháns*, all Sikhs, due possibly to the great demand by the Sikhs of the neighbourhood for ivory combs;

(b) the *chúrigars*, Khatri by caste, who are proprietors of concerns, where *chúras* or bangles are made, and

(c) where the artisans are Mussulmans.

The two former castes form a large part of the population, but the number of persons engaged in the Ivory Industry may be counted on the fingers of the hands. What is true of Delhi is true of Amritsar that there is no special caste identified exclusively with the art like the *sunárs* of the gold and silver industry.

Of the “*Rámgaríás*” there are about 12 persons employed in the manufacture of articles of use and ornament, while bangle-making claims another dozen of “*Khatri chúrigars*” and in both cases the calling is hereditary.

24. As the work is less ambitious than that of the fellow artisans of Delhi so the apprenticeship is less arduous and lengthy. Lads aged from 10 to 12 years are apprenticed (*shágird*) for at least six months or a year to a master craftsman, who puts the youngsters on to working on soft woods, then to harder woods, until both hand and eye are sufficiently trained when they may be employed on the precious ivory itself without much danger of spoiling the work or material. Sometimes the apprentice is expected to offer a small gift of some sweetmeat to his instructor, but this is not enforced, and it might be taken, as a rule, that the articles of apprenticeship require neither a “fee” from the lad nor pay from the master. When the pupil has made some progress in the acquisition of the art the teacher makes an allowance which is gradually raised to the pay of an accomplished workman. Sons often succeed to the business of their fathers: other relations may throw in their lot with their kinsman teacher or start fresh concerns of their own, but this from the fact that the industry is not a growing one must very seldom be the case, and is borne out by the fact that the number of shops has remained stationary for some years.

25. So far as the manufacture of toys and articles of use or ornament are concerned the workers manage their own business in every detail, that is, the *tarkháns* or *Rámgaríás* import their own raw material and work it themselves assisted by one or two minor craftsmen and apprentices. In a small shop the working proprietor represents the whole establishment: in a few others the master craftsman employs a few hands so that it might be said that both systems of working obtain in Amritsar.

The result is that as each worker has more or less to live by what he makes from day to day there being no one of sufficient capital to permit of months passing while a perfect piece of work is being prepared, the best specimens of Amritsar work can only compare with the cheaper goods manufactured at Delhi, and it is a fact the more to be lamented that the exquisite productions of the latter place are not to be found here since it cannot be many years ago when they were not widely separated rivals in the art.

Those employed in bangle or *chúra* making work under somewhat different circumstances. Their business is represented by two classes of persons, the Khatri *chúrigar*, who furnishes the capital and arranges for the import of the tusk, besides watching for the demand for the finished article, and the actual artizan, Muhammadan, who is practically a servant turning out so much work for a given wage. The Muslim worker and his Hindu employer appear to carry out each his own part to their mutual satisfaction.

26. The tools used may be conveniently divided into three classes—

I.—Those used in perforation work; carving and in-lay-work—
Illustration No. 2.

II.—Tools for the manufacture of combs—Illustration No. 3.

III.—Tools used by the *chúrigars* for bangle turning.

Many of these are similar in make and employed in a similar manner as tools used in wood or metal work, the names alone being different. They are—

I.—Perforation work, etc :—

- (1) *Rethi* or file.
- (2) *Barma* or drill.
- (3) *Kath-kashi*.
- (4) *Parkúr* or compasses.
- (5) *Hathouri* or hammer.
- (6) *Parkár* or fixed compasses.
- (7) Drill-bow.

Of these Nos. 2 and 7 are clearly indicated by their names. No. 1, the *rethi*, unlike ordinary files, which are straight, is curved like a scythe, and has teeth cut on each side of the flat surface which do the filing while the edge is convenient to both cut and file, say, as a fret-saw would.

II.—For combs—

- (1). The *ári* or saw.
- (2). The *patal*, a fine file used in cleaning between the teeth of a comb and making the surfaces smooth between tooth and tooth.
- (3). The *thasul*, used in rounding the edges of the teeth on the outside to prevent the hair catching or being torn by the sharp edge of the comb.
- (4). The *rethi* or file, rough cut on one side and smooth on the other.

III.—Tools used for turning—

- (1). The *dutli*, turner's tool used for removing inequalities in the tusk and getting a smooth surface;
- (2). *Chírna*.
- (3). *Singari*.

After the outer surface of the ivory cylinder from which the *chúras* are to be cut has been made perfectly even and smooth by the *dutli*, the *chírna* is employed to cut a number of deep grooves representing the thickness of the *chúras*. The bangle is now almost ready, all that remains is to sever the several bands between the grooves from the parent cylindrical block, and this is done by the *singari*. This tool is a bit of flat steel, broad in the middle and tapering to a fine point at each end: the ends are well-tempered, and the tool is used to turn the ivory bark by doing so towards the thickness of the tool. The length of the part thus turned is the breadth of the *chúra* to be cut. The tool is applied while the block prepared up to the second process is quickly revolved by the bow, and the bands made by the *chírna* come away from the tusk one after the other. The rings are now ready made *chúras* or bangles, no polishing or other manipulation is necessary. If painting or lacquering has to be done, it is always done before the *chírna* is set to work.

The bangle-turner's bow and lathe are of the ordinary kind used by carpenters, and present no special features.

27. It has already been said that in the early stages the apprentice gets no wage, later on a few annas are given according to the quality of the work done, but the most that even trained hands aspire to is Rs. 8 to Rs. 18 a month, a very small wage compared to the best pay in Delhi.

In regard to the profits the writer of the report states :—"There is no more delicate question to put to an Amritsar artizan or manufacturer than the one 'What are your profits?' It is the one he will not answer. He is afraid of the tax-collector, and equally afraid of having his financial position guessed at; he is difficult to convince that the question is disinterested so far as he is personally concerned, and that it is only asked for the 'statistical value of his answer.'"

In addition to the artizan who shapes and forms the various articles in ivory with his own hands, there are two necessary minor helpers, those who conduct the business of the *chirmawāla* or sawyer, who saw the tusk into the proper sizes required for each kind of work before it is put into the hands of the craftsmen, and the polisher to whom it goes afterwards for a good finished surface. One or two sawyers do all the sawing required by all the shops in the city, and one polisher, with occasional assistance, disposes of the whole of the polishing. The remainder of the work is done in the shops already referred to, the worker in each class doing all that is necessary for his particular task. Of course, it goes without saying that the more difficult part of the work in any one article is entrusted to the more proficient workmen in a shop or reserved by the master for treatment at his own hand.

28. Patiala is the third city in which ivory carving proper is conducted, and during the lifetime of the late Mahārājah the special artists employed by him attained to a very high degree of proficiency. I regret that I have not been able to obtain as much information as could be desired from this interesting centre, but the report furnished contained only the very scantiest details.

It appears that at the present time there are only three workers, Sheikh by caste, who preserve the knowledge of the art entirely in their own families. The old patronage which they formerly received is not extended to them as liberally now, and they are more or less dependent on what they can sell to passing visitors.

The system is that of the small working proprietor, each man making and selling his own productions.

The tools they use are few, the saw, the adze, the turning frame, knives, rasps and files, all country-made, and the rate of profit is small amounting, according to the report, to only 6 pies in the rupee, or little more than 3 per cent.

The Patiala artizans employ themselves in the production of carving and bracelet-turning, but owing to the lack of means of disposal the character of the former is inferior.

29. Hoshiarpur, which is the great centre of the in-laying-work and manufacture of decorative furniture, has also several people employed in bangle-turning. The rule there holds good for everywhere where bangles are made, viz., that it is only the outer bark of the tusk which is used for the manufacture of bangles. The ivory bracelet is in exceptionally good demand in this part of the Province, and the majority of Hindu women hardly consider their trousseau complete without two or three sets. A set of these bangles comprising sometimes as many as a hundred separate rings is termed collectively a *chūra*, and frequently reaches from the elbow down to the wrist, and as the sloping of the arm corresponds roughly with the shape of a tusk the outer rim of a tusk frequently finds its way in graduated bangles on to a woman's arm. The end of a tusk, that is, the portion which is too thin to permit of more bangles being made, is employed in the other ivory industry of Hoshiarpur, in-laying, with which the district is more generally associated.

The workers are for the most part ordinary carpenters, mostly Hindus, without being confined to any particular caste. They number about 40 at Basi

Ghulám Hussain, 30 at Khuáspur, 20 at Sadr and 10 at Pur Hiran, and in addition there are the children of various ages undergoing training, so that there are not many less than 200 actively engaged in this industry.

As is the case in most Indian arts, the industry is hereditary, without being as exclusive as is popularly supposed, the children of an artizan taking to the father's trade without reference to his own capabilities. In-laying does not require the same application and same instinct as carving, and the reason of the industry being hereditary lies rather in the intense conservatism of the people than in the necessity for special gifts.

This conservative peculiarity is illustrated further in this particular trade, for though the in-layers of Basi Ghulám Hussain have been known throughout the Punjab for three or four generations, and though the demand for decorative furniture amongst Europeans has led carpenters to adapt themselves to new forms, yet the peculiar inlaid work with ivory remains practically local.

The organization of the workers is non-existent. Each worker works at his own home and for his own hand, surrounded by the members of his family and making the table or box, whatever he pleases, and completing it himself by in-laying it. When it is finished he takes it to the bazaar, and disposes of it to the best advantage he can to the dealer, who maintains a shop in the town, or wanders over the length and breadth of India from Pesháwar to Calcutta, to Madras and Bombay, carrying with him several hundred-weights of goods which he displays on the verandahs of the bungalows.

There is hardly any one of the actual workers possessed of sufficient capital to command exterior service; the men appear, as a rule, to be extremely poor, and living as they do from hand to mouth, the main object of the artizan class is to dispose of the goods as soon as possible for what they will fetch.

Of training a description is impossible, as it is without method. It appears to consist mainly of mere intelligent watchfulness on the part of the boy looking on at his father working in the homestead, and picking up gradually the incidental points,—not a difficult task seeing that from his cradle he is surrounded by those engaged in the work, and bit by bit imitating those whom he has been watching. The child is usually given a few hints at the age of 7 or 8, and with those he may be said to enter on his apprenticeship such as it is, and in the course of 10 or 12 years he becomes a capable workman.

The tools employed are those generally used by carpenters and ironsmiths for in-laying, engraving and setting. No progress has been made by the artizans in the improvement or invention of implements, though some English made machines are gradually coming into use; but the better work is still done by hand.

The profits of the trade appear to be extremely slight, the chief gainers being the middleman shopkeepers, who seem to have a kind of local understanding to keep down prices paid for the finished article, while charging the purchasers three and four times the amount they themselves have invested.

On the rare occasions on which the artizans work for wages they receive from Rs. 4 to Rs. 16 a month, and Rs. 10 may be taken as a fair average of the monthly income of the artizans when working for themselves, an amount which fades into insignificance by the side of the bannia's profits. The few artizans who themselves employ others make, however, a fairly handsome profit, sometimes as much as 100 per cent.

30. In Ludhiána, which may fairly be considered the centre of turning, both the manufacture of *chúras* and billiard-balls find a place.

In the town of Ludhiána the turners are Qureshi Muhammadans, who are the hereditary depositors of the trade, and who are commonly called *chúrigars*. The artizans are of the same faith, and also carry on the trade hereditarily.

The organization is simple, the turner working at home and selling the *chúras* either to order or to casual customers.

31. The turners' implements used in Ludhiána are fuller and of a more elaborate description than are employed elsewhere, and they have accordingly been chosen for illustration. Illustration No. 4.

The names, Urdu and English, are as follows :—

- I.—*Jand*, the turner's frame.
- II.—*Kanda*, iron-rod.
- III.—*Sua*, pointed pivot.
- IV.—*Kamāna*, bone.
- V.—*Subbal*, iron-rod.
- VI.—*Loha rach*, pointed chisel.
- VII.—*Mathni*, a broad chisel for smoothing.
- VIII.—*Singari*, used for cutting the ivory and separating the cylinder into bracelets.
- IX.—*Chirna*, a fine pointed handleless chisel.
- X.—*Rangrata or Agwartha*, polishing stick.
- XI.—*Kher*, a fine pointed chisel.
- XII.—*Verma*, gimlet.
- XIII.—*Kalbāt*, the wooden cylinder on which bracelets are mounted for colouring.
- XIV.—*Bambia*, stick to which the piece of ivory is glued with *lāk* for carving.
- XV.—*Tira*, a wooden pin introduced into the hollow of the ivory while on the lathe.
- XVI—XVII.—*Rachi* and *roda*, bars of iron worked into a blade at ends, used for turning ivory.
- XVIII.—*Dhur*, turning axle.
- XIX.—*Tesha*, adze.
- XX.—*Ari*, saw.
- XXI.—*Chari*, hooked tongs.
- XXII.—*Kethi*, files.
- XXIII.—*Ghamāna*, bow string.

The amount of work that an efficient worker can do in a day is astonishing, he being able to produce about 8 sets of coloured bracelets a day, containing some 160 to 240 separate rings; the profits, however, are small, amounting to not more than $1\frac{1}{2}$ anna per set, *i.e.*, 12 annas a day represents a workman's earnings. The turner of billiard-balls can at most produce one set of three per day; the value of the ivory employed in a set is from Rs. 16 to Rs. 18. A turner receives when working for a trader Rs. 3 a set; the trader charges his customer from Rs. 3 to Rs. 4 a set more: a good set being obtainable for from Rs. 20 to Rs. 24.

32. Multan is also an important centre of the industry of bracelet making, the bracelets being made from the *naq* described above, while the *gati* is used for *sumadāns*, buttons, *dibiās*, small pen-stands, boxes and chess-pieces of an inferior quality, all turned work not carved.

A full *naq* will supply from 150 to 175 pairs of bracelets.

Only two qualities of bracelets are manufactured here: the one thick and the other thin, and, as a rule, the workers work entirely in their own homes, and except in very few instances are piece-workers of the wealthy *mahājans* of the city.

The usual practice is for the *mahājan* or banker to purchase the ivory, and hand it over to the turner, who transforms it into *chūras*, receiving in return pay by weight—for thin bracelets 8 annas a lb and for thick 4 annas.

The price of *chúris* depends on the width, the unit of measure being the *lai* about $1\frac{1}{4}$ inches, and the following are usually supplied for a rupee—

10 *chúras* of 14 *lai*.

9 *ditto* 12 „

8 *ditto* 10 „

7 *ditto* 6 „

40 to 60 for children.

An experienced worker can turn out some 150 bracelets in a day of six hours.

There are only 9 turners in Mooltan ; the demand is much greater than they can supply, and a fair number are imported into the villages of the district from Dera Ismail Khan and Chiníot.

33. Much the same remarks apply to Dera Ismail Khan, where, however, there is a small industry in the hands of the ordinary *tarkhúns* in the manufacture of ivory knobs and studs for affixing to lacquered wood-work. It is unimportant, and may be disposed of in the words of Mr. Lockwood Kipling:—

“Ivory ornaments in the shape of knobs, studs and flowers ingeniously etched and carved are liberally applied This practice arose in the first instance from the necessity for covering with an ivory stud the hole left in the ware by the iron lathe point on which it revolved. It is carried to excess at Dera Ismail Khan.”

34 In Lahore the turners are Mughal by caste and the profession, as elsewhere, is hereditary. The boy of a family is invariably taught by his father, beginning when about 10, by making wooden *chúras*, and then being set to prepare round articles such as *naukas* out of bone, eventually being permitted to use ivory.

The ordinary standard of *chúras* is a set of 100, and the usual prices charged are—

Per set of uncoloured, thin	...	...	...	Rs. 5 to Rs. 9.
Do. do. thick	...	...	...	Rs. 4 to Rs. 7.

The work is of a fair quality and the instruments used are only 7 in number:—

1, the *Tábi*, a long iron plane.

2, *Chírna*.

3, *Singari*.

4, *Kherád*.

5, *Kamání*.

6, *Sil*.

7, *Tesha*, the nature of which has already been described.

35. Gujránwála calls for no further remark, the trade is practically in the hands of one and the art of turning presents no special features there.

36. Dera Gházi Khan has a fairly flourishing trade, and one or two points require notice.

The pupil usually learns his art by the use of cocoa-nut, and in a year's time can safely be trusted with ivory. The system of work is somewhat peculiar, similar to that which prevails in the manufacture of silver ornaments. The would-be wearer himself purchases the ivory, and hands over the raw material to the workman, who manufactures the set sometimes at a daily wage, sometimes at so much per set. In the few cases where the workman provides the ivory his usual charge is the price of ivory *plus* one rupee per set, and his average profits range from Rs. 20 to Rs. 40 a month. The tools in use are the universal *chírna* and *singari*, and in addition the *kirpána* used for smoothing the ivory, and the *larhána* used for marking off the bracelets on the piece. Illustration No. 5.

VI.—THE WORK AND ITS PROSPECTS.

37. In the factory at Delhi the carvers are confined to their particular branch, while side by side with them under the same organization and same roof work miniature painters and workers in sandal-wood, and though the ivory carvers are frequently capable of working in the latter material, they are, as far as their respective crafts are concerned, practically apart.

38. As in all Indian work, there are certain well-defined stock models, which are reproduced time after time, possibly with slight variations in ornamentation as they suggest themselves to the fertile ingenuity of the carver. It would be a mistake, however, to imagine by this that they are incapable of working out of the beaten tracks, for not only are the best carvers possessed of considerable artistic feeling and imagination, and capable of reproducing their ideas in ivory, but they are extremely adept in carving any figure or design which may be specially ordered even from so unsatisfactory a model as a photograph. Some of the best, if not the very best, work produced is that done under these conditions; the purchaser who desires a particular object carved must necessarily be wealthy, and the most skilful worker is put on to execute the commission and the price, of course, is naturally heavier than what is usual for specimens of stock designs.

These latter cover a wide field, and of each design there are several qualities dependent partly on the class of ivory, partly on the amplification in the way of tracery and perforation, and partly on size.

Below is appended a list of the stock designs, with minimum and maximum prices of specimens of each description:—

Elephants	...	...	...	...	Rs. 2 to	Rs. 2,000
Bullock-carts	...	...	...	...	„ 4 to	„ 1,500
Peacock-ships	...	...	...	...	„ 15 to	„ 300
Hindu pantheons	...	...	...	...	„ 4 to	„ 2,500
Chessmen	...	...	...	...	„ 2 to	„ 1,500
Camels	...	...	...	...	„ 1 to	„ 100
Horses	...	...	...	...	„ 1 to	„ 100
Palanquins	...	...	...	...	„ 7 to	„ 100
<i>Jamjhani & palki</i>	...	...	...	...	„ 7 to	„ 100
Paper-knives (with variously designed handles)	...	...	...	...	„ 10 to	„ 400
Card-cases	...	...	...	...	„ 4 to	„ 50
Boxes	...	...	...	...	„ 20 to	„ 200
Picture-frames	...	...	...	...	„ 15 to	„ 300
Sticks	...	...	...	...	„ 10 to	„ 150
Combs	...	...	...	...	„ 4 to	„ 50
Fans	...	...	...	...	„ 15 to	„ 100
Miscellaneous toys	...	...	...	...	„ 8 to	„ 10

Of these designs I have selected five for illustrative purposes, and one other that of a model of the *Táj Mahal*, and I may here record my thanks to Mr. W. I. Cadman, 24th Company, Royal Artillery, of the Fort Delhi, for the assistance rendered in the preparation of the sketches. Illustrations Nos. 6—11.

It is a pleasing feature in the work that most of the designs are essentially Indian, and the craving after European models so characteristic of other Indian arts has not as yet begun to influence the Delhi carving to any appreciable extent, and consequently there is an absence of deterioration to imitation.

39. The characteristics of the work may be roughly divided into three:—

I.—Figure or model carving.

II.—Perforation.

III.—Tracery, usually floral.

These three characteristics are frequently combined in a single specimen, and it is only in the cheaper model specimens that ornamentation is not introduced.

40. Of the three the former is the least satisfactory. There is in every figure a certain unnatural stiffness, a want of flexibility in appearance. Even in the highly carved elephant figures, where the trappings, chains, decorated *howdahs*, &c., are exquisitely executed, the general effect is somewhat marred by the clumsiness of the central figure. It is often a little exasperating after admiring the perfect symmetry of the tracery designs to be confronted with an animal round which these designs are worked apparently taken out of a child's Noah's Ark, without joints, and with its left side invariably concave and its right convex.

For this there are two reasons, the one historical, the other the result of the material in which the work is executed.

There is no doubt that the long period of Mussalman predominance, with its attendant discouragement of the productions of animal figures, has had a limiting influence on ivory carving as it has on all Indian arts. The practical proscription of anything which might tend to be construed into an image has so effectually discouraged the art of producing them that the best work must be sought for in what was a legitimate subject for representation.

The other reason is the desire to as far as possible economise the material used, the result is that in order to prevent waste, the carver works as near the outer bark as possible, and as there is in the tusk itself a natural curve, the effect on the figure is that noted above, the peculiar lop-sidedness (if I may use a forcible term) of the animal.

Besides the desire to economize there is a further quality in the ivory itself which leads to the same result, *viz.*, that the further you get away from the bark the poorer becomes the ivory, more brittle, more liable to discolouration, and harder to take on polish.

The Jury Committee of the Exhibition of 1864 described Punjab carving as being at a low ebb. This appears still to be true to some extent of figure carving, though even the figures of Delhi compare not unfavourably with the best specimens of Burma. This opinion, moreover, is to be read with one important modification, for it should be remembered that the best work of the Province, that of Delhi, was not represented at the Exhibition, and there is a considerable difference between a Rs. 2,000 model from that place and a Rs. 20 or Rs. 30 one from Amritsar, the only survivor of carving proper of the Punjab exhibitors. A reference to the list of exhibits will show that the Province was represented by small and inferior objects only.

However applicable those remarks may be to figure carving, there must have been a considerable advance in tracery designs and perforation.

41. Tracery designs, geometrical and floral, of the most intricate character are exquisitely worked, and the same design, for instance, in the handle of a paper knife is reproduced time after time without the least discrepancy. Descriptions of such designs are impossible, but they all display a real artistic feeling amongst the workers. There is nothing so striking as the comparison between the carparisons of a figure and the figure itself, or between, say, two paper knives, one with an animal design and the other with a floral pattern.

42. The most difficult work of all is that in which Lála Faqír Chand's workmen excel—perforation. Two of the best specimens, to which no reproduction can do justice, are one a chain attached to a *howdah* on one of the elephant figures made of a solid piece of ivory—elephant and trappings—with the links interlaced and separate, each link not being greater than the size of a pin's head, and the whole chain containing upwards of 50 links, and the second the head of a paper knife, the exterior being a beautiful floral design closely worked, and the interior hollowed.

The caged devils of Burma, remarkable as they are, are not so difficult to reproduce as some of the figures made in Delhi, where it is not infrequent to find an exterior design of considerable intricacy reproduced on an interior piece of the same block.

43. In connection with ivory carving there is an interesting adjunct—miniature painting conducted in Delhi. The two industries are closely allied, but

the latter is outside the scope of the monograph, and all that it is necessary to note here is the method of preparing the ivory for the painter. The ordinary method is by sawing the tusk with a fine saw into long thin plates, which are subsequently cut as required into various sizes. The plates are then generally placed in a press with the object of preserving the flattened shape, and kept in that position for four to nine months, until they become properly dry, seasoned and clear of oil, and there remains no further danger of cracking or discolouration. On being taken out the plates are subjected to frequent and careful planing with instruments, gradually becoming finer and finer, until at length they become perfectly smooth, and are passed over to the polisher, who after polishing them for some time with chalk completes the process, and the plates are ready for the miniature painter.

44. The prospects of the ivory trade in Delhi are stated to be on the whole declining. Pessimistic views are, on the whole, every bit as prevalent with the Indian dealer as with the merchants of the west, and I am not sure that these views are altogether justified. Lāla Faqir Chand tells me that at the present there is a marked depression in the trade due to the out-put being in excess of the demand, but this is merely stating the matter in another way. Certain it is that there is no deterioration in artistic skill, and, if the standard of the work may be taken as a criterion, little in demand, otherwise the skill would not be asserted, unless an adequate remuneration were forthcoming.

Those causes which operate against the development of other Indian arts are to some extent apparent here. The daily increasing proximity of Europe leaves the present Anglo-Indian with less inclination and power to patronize native art in the way and to the extent his predecessors did, and there is a constant tendency to more and more Europeanize the ornamentation of a bungalow, with the attendant result that natives adapt themselves to the production of articles more and more on an European model. The increase of communications internally, resulting as it does in the constant changes of officials, leaves the latter with less desire to accumulate articles liable to destruction, and there is also the constant tendency to estimate the cost of labour on the basis of that of the unskilled artizan, and Europeans expect to obtain articles in India at a ridiculously lower rate to what they could purchase them for in England. The idea that the prices asked are excessive is not in the ivory trade a just one, but the natural result on the industry itself is the production of inferior work to satisfy the market.

The levelling tendency of British rule, while it has, on the one hand, bettered the condition of the mass of the people, has by the gradual absorption of the old wealthy classes and the reduction of native courts, removed the greatest incentive, that of patronage, that native art possessed, and though the country be wealthier, the wealth has the tendency of gravitating from those who had the desire to encourage art, to a class which has no pretension to artistic feeling.

On the other hand, though both the Anglo-Indian and native purchasers are thus limited, the same causes have widened the market in another direction. Year by year the tourist element increases in volume; in the majority of cases a tour pre-supposes wealth, and though the flying tourist can hardly be regarded in the light of a patron of art, he does purchase artistic treasures as curios.

In some cases the travelling visitor buys the best, especially the Americans and the few Russians who travel here; our own public are not so much to the fore as one could wish.

45. In Amritsar ivory carving and bangle-turning are the only occupations to which the artizans are capable of turning their attention, with some few exceptions who occasionally during a lull in the demand for ivory goods take up wood work. The carvers usually employ themselves on small figures of animal and mythological subjects, a little in-lay-work, perforation or *pinjara* work, manufacture of combs, plain and fancy, walking-stick handles, perforated and carved boxes, paper-knives, bracelets, and *surmadānīs*, the character of which can be seen in the appendix,——(Illustrations Nos. 12—14) while Illustration No. 15 gives a good idea of the conditions under which ivory *chúras* are made.

Articles of use, such as *surmadúnís*, are frequently made in the pattern of vases, boxes and ornamental cylinders and globes in various designs representing fruits or vegetables, *e. g.*, the mango, *brinjal*, chili, maize, &c., while in perforation and in-lay work both geometrical and floral designs are used. At best the work is of a cheap quality, and the ordinary prices obtaining are—

						Rs. as.	Rs. as.
<i>Sarmadúni</i>	...	...	...	...	...	0 4 to	2 8
Combs	...	...	...	...	...	0 8 to	5 0
Toys, figures, &c.	...	...	...	...	...	1 0 to	20 0
Card-cases and paper-knives	...	...	...	...	...	1 0 to	7 8

while for special work it is usual to arrange the price beforehand according to the work required.

There appears to be in the Amritsar work little or no ambition : a large part of it consists of plain undecorated pieces, the figure carving is wooden and clumsy in the extreme, and the perforation work, though at first sight pretty, displays a lack of variety, while the floral designs are essentially simple.

At the best Amritsar work can be classed as simply pretty and effective curios, and it has no pretensions to be compared with the best examples of the artistic work of Delhi.

The future prospects of the Amritsar work cannot be said to be hopeful.

46. One point should be noted, and that is, that it aims at a different market than Delhi. So far as Europeans are concerned, Amritsar only supplies them with small cheap curiosities, but it has, unlike Delhi, a fairly wide native market. As the religious capital of the Sikhs, the ivory combs find a ready sale, and the Amritsar *chúras* are in fair demand amongst the Jat women of the Central Punjab. But the demand from these two sources is steadily declining. Twenty years ago the cost of the raw material ranged from Rs. 4 to Rs. 6 ; it has now risen to from Rs. 6 to Rs. 16 ; wages, too, have since risen, and the cost of the finished article now as compared with then has enormously increased.

The rise in price has consequently affected the demand, and the growing tendency amongst natives to curtail expenditure on marriage ceremonies has encouraged the use of silver *chúras* in substitution for the much dearer ivory.

The numbers of workers are steadily decreasing, and both the Rámgarías and the Muhammadan *chúrigars* send their children to school rather than put them to work in their shops ; draftsmanship claims a fair quantity and the Railway workshops attract more.

47. From all the centres of bangle-turning comes the same reply, that the cheapening of silver and the dearness of ivory are gradually but surely driving the latter out of use, and though the ivory *chúra* is not likely to permanently disappear there is little prospect of the industry recovering its old prosperity.

As has been already noted, the in-layers of Hoshiárpur use any article for their work, and the character of the work is well illustrated in the appendix, Illustrations Nos. 16—17. The decorations applied to furniture are extremely simple in design, geometrical and floral figures being practically exhaustive.

48. The Hoshiárpur trade rose suddenly into great favour amongst Europeans, and the workmen have easily adapted themselves to decorating Europeans' furniture in addition to articles in native use. The first glamour of the novelty has, however, worn off, and though the favour it has found amongst Europeans, both in India and at home, is not expressed as loudly as formerly, there is no reason to doubt it will, if only on account of its effective decorative qualities, find as ready a sale in the future as it has done in the past.

One thing, however, is necessary, and that is a departure in the invention of new designs. The workmen are capable of reproducing them, as is evidenced by their readiness to in-lay any design they may specially be asked to do, and it would be well if they were encouraged more in this direction, so that they might the more easily satisfy the demand for variety in the English market, which after all is the mainstay of the in-laying trade as it is of the art of ivory carving.

APPENDIX.

LIST OF ILLUSTRATIONS.

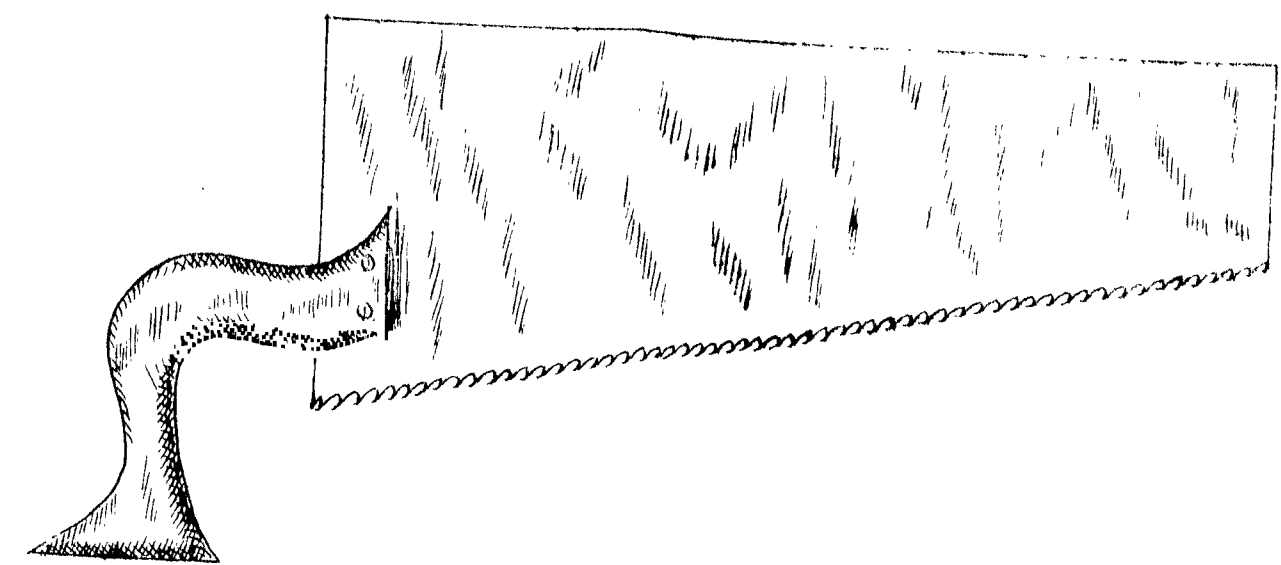
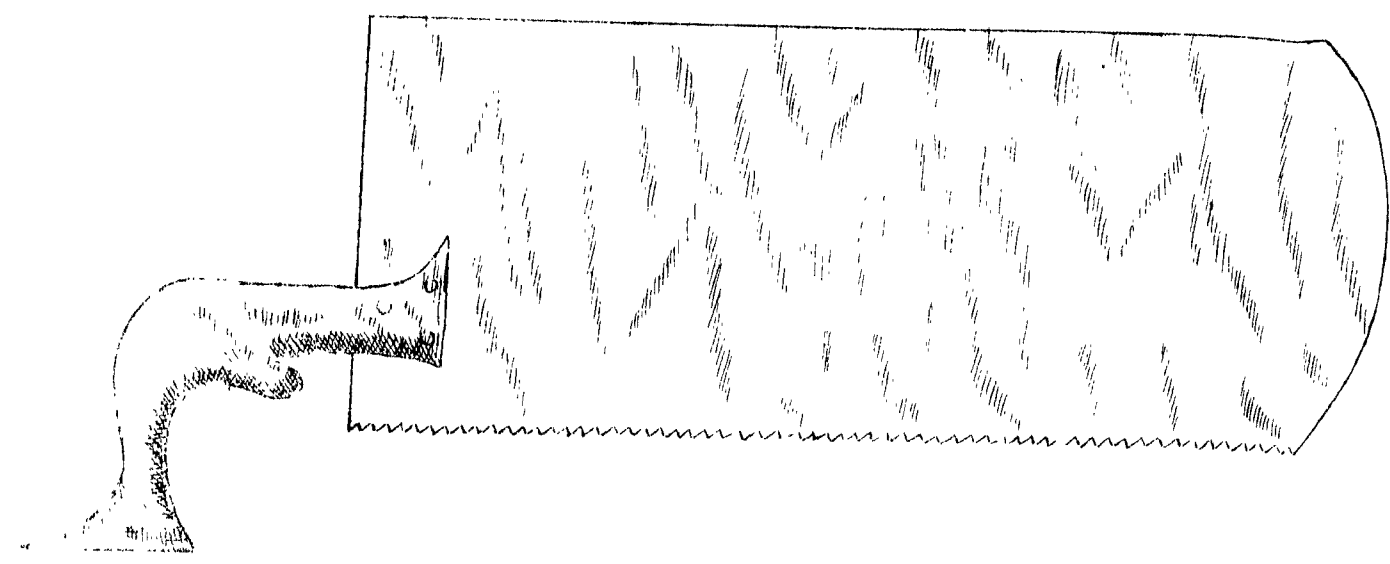
Number.

1.—Carver's Tools	...	...	...	...	...	(Delhi).
2.—Perforator's Tools	...	...	...	...	...	(Amritsar).
3.—Comb-maker's Tools	...	...	...	...	...	(Ditto).
4.—Turner's Tools	...	...	...	...	...	(Ludhiána).
5.— <i>Chúrigar's</i> Tools	...	...	...	...	...	(Dera Gházi Khan).
6.—Model of Elephant	...	...	...	...	...	(Delhi).
7.—Model of Táj Mahal	...	...	...	...	...	(Ditto).
8.—Model of Elephant	...	...	...	...	...	(Ditto).
9.—Paper-knife	...	...	...	...	...	(Ditto).
10.—Peacock-ship	...	...	...	...	...	(Ditto).
11.—Bullock-cart	...	...	...	...	...	(Ditto).
12.—Combs and Knives	...	...	...	...	...	(Amritsar).
13.— <i>Surmadánis</i> and <i>Chúras</i>	...	...	...	...	...	(Ditto).
14.—Toys	(Ditto).
15.— <i>Chúrigars</i> at work	(Ditto).
16.—Furniture	(Hoshiárpur).
17.—Furniture	(Ditto).

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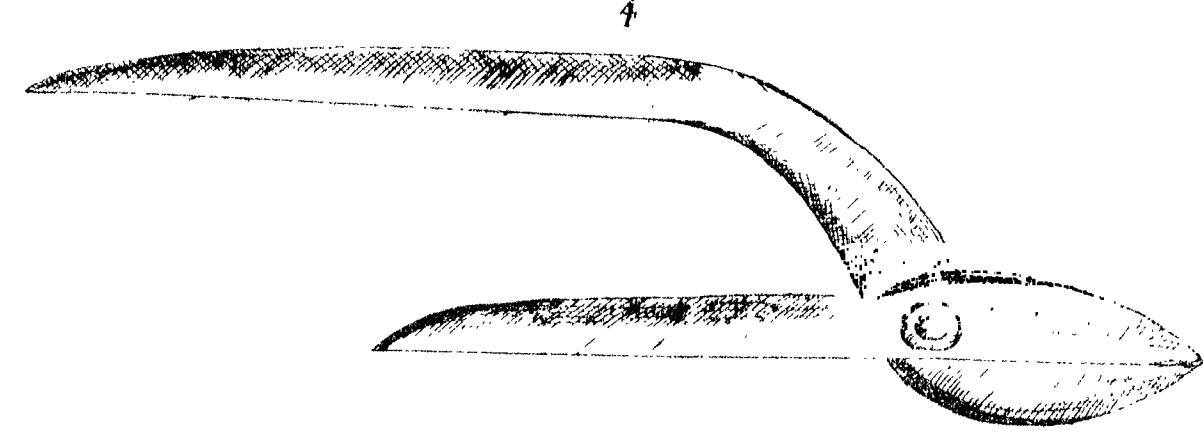
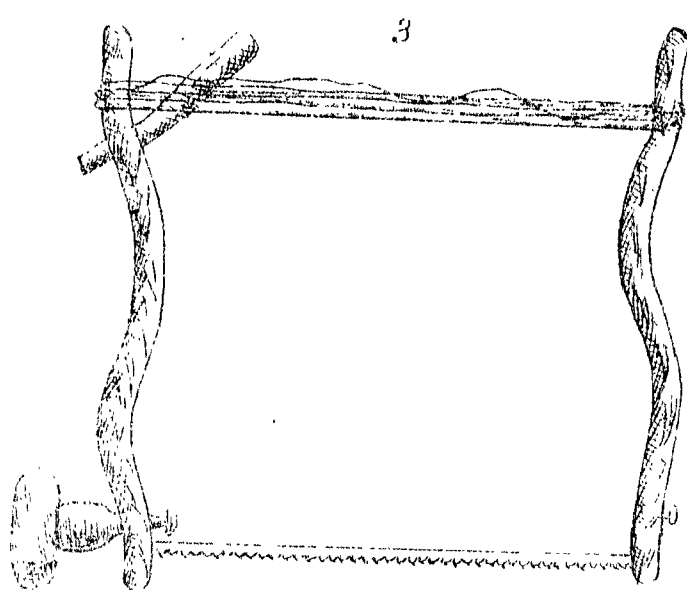
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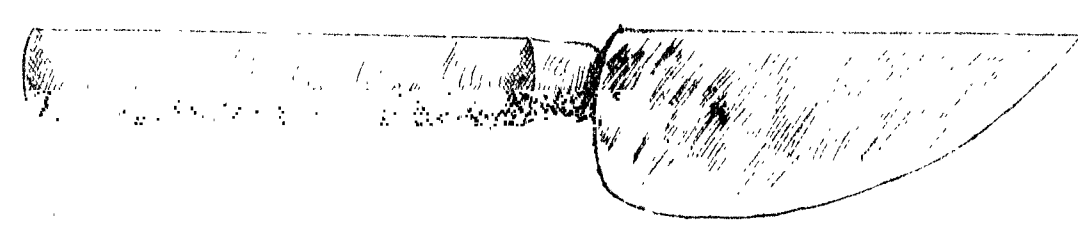


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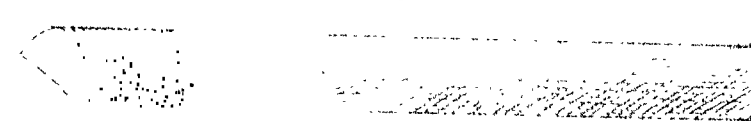
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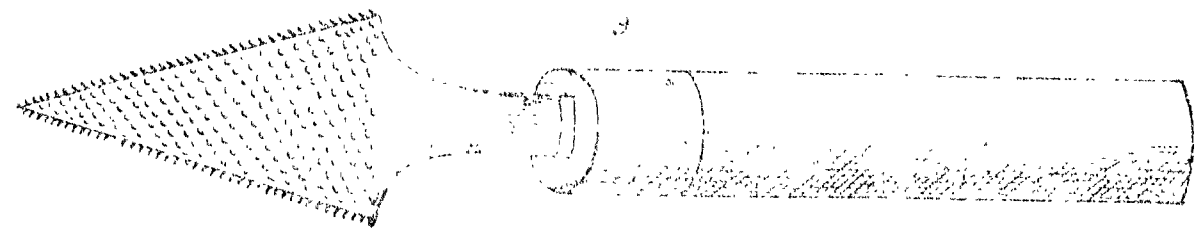
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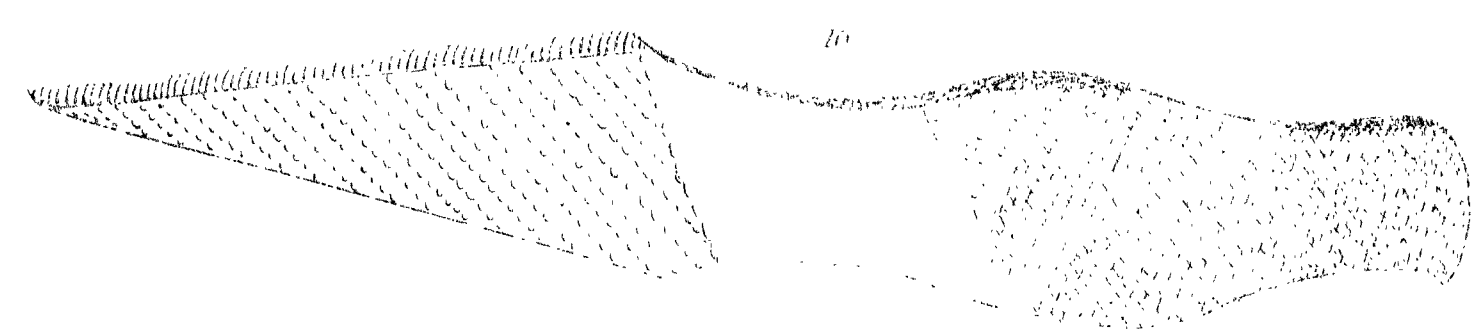
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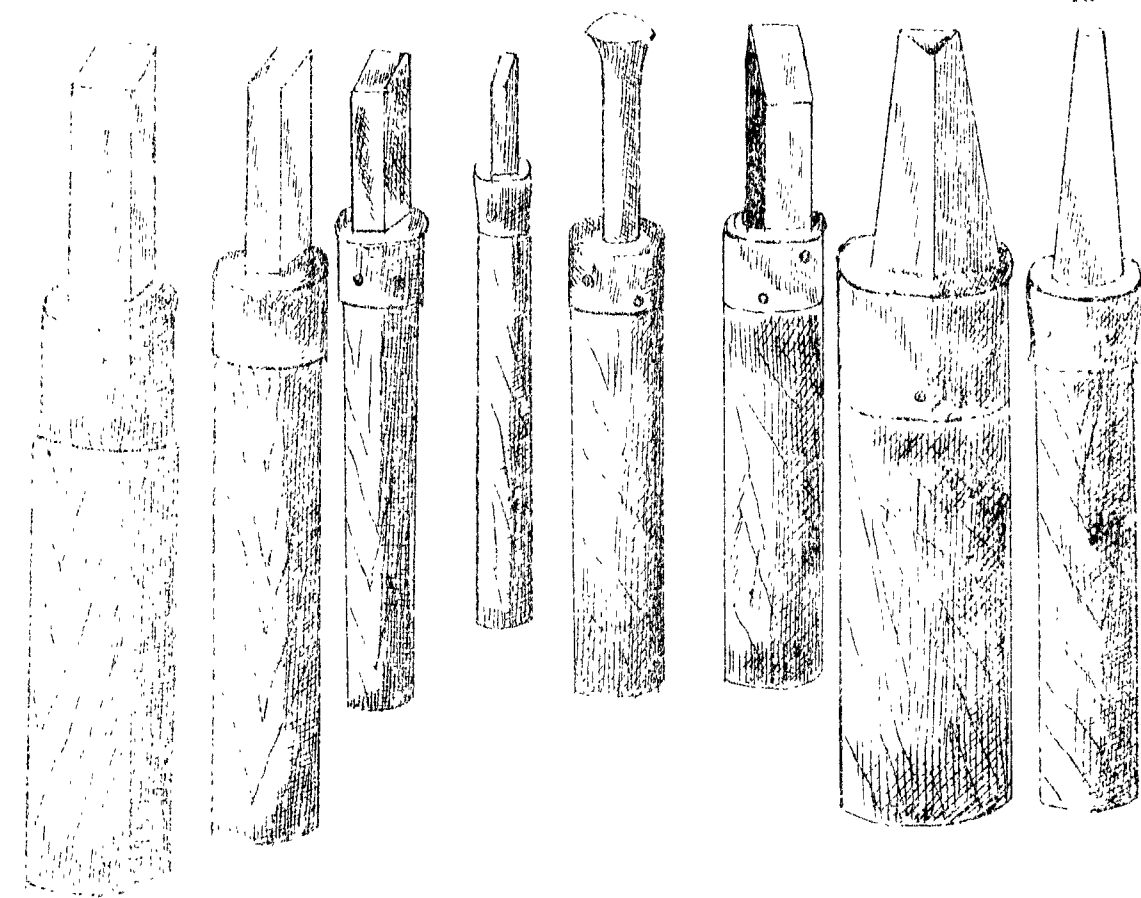
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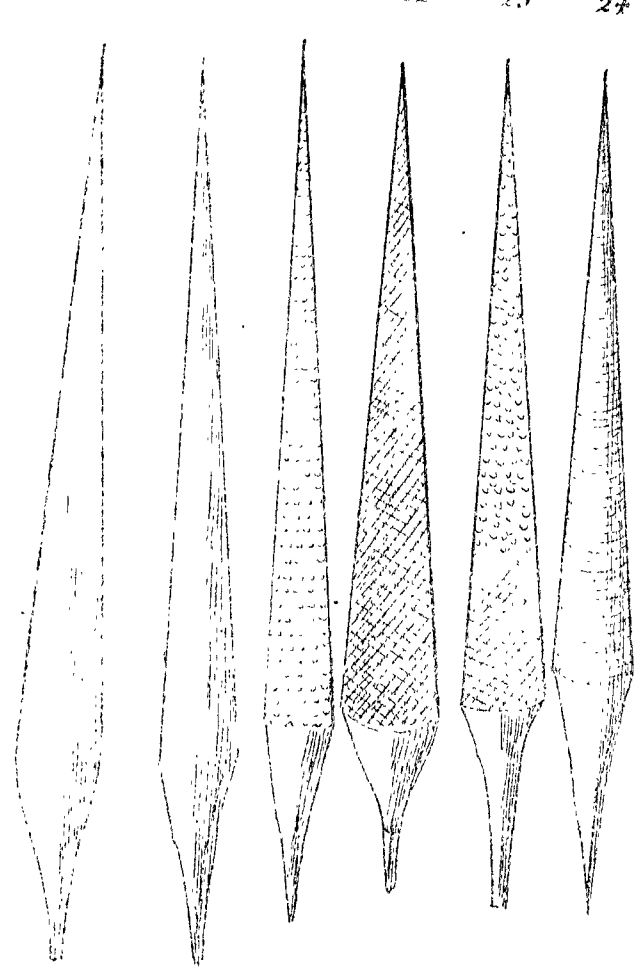
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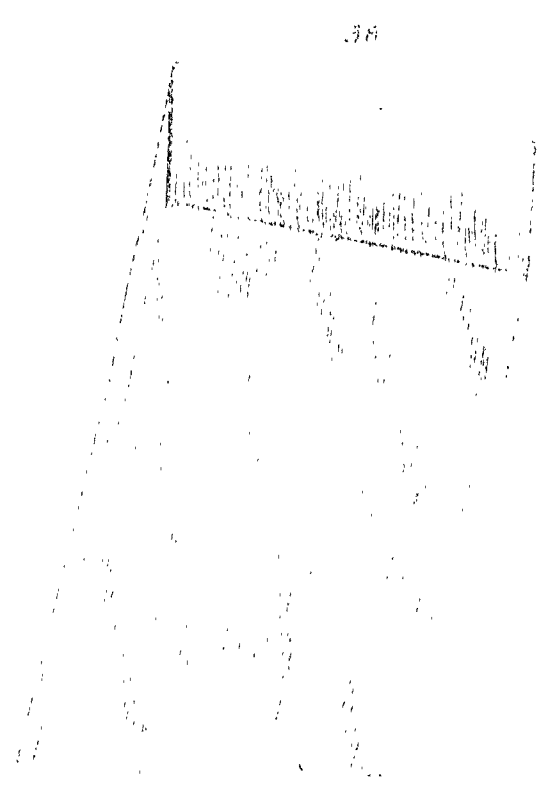
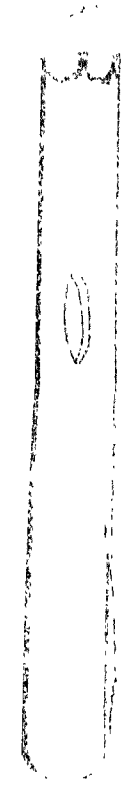
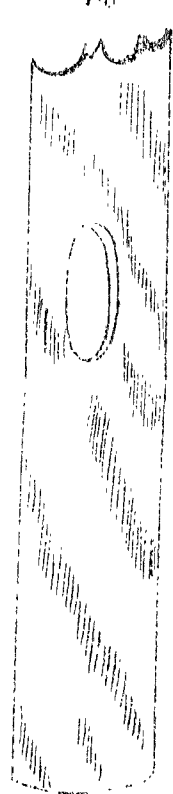
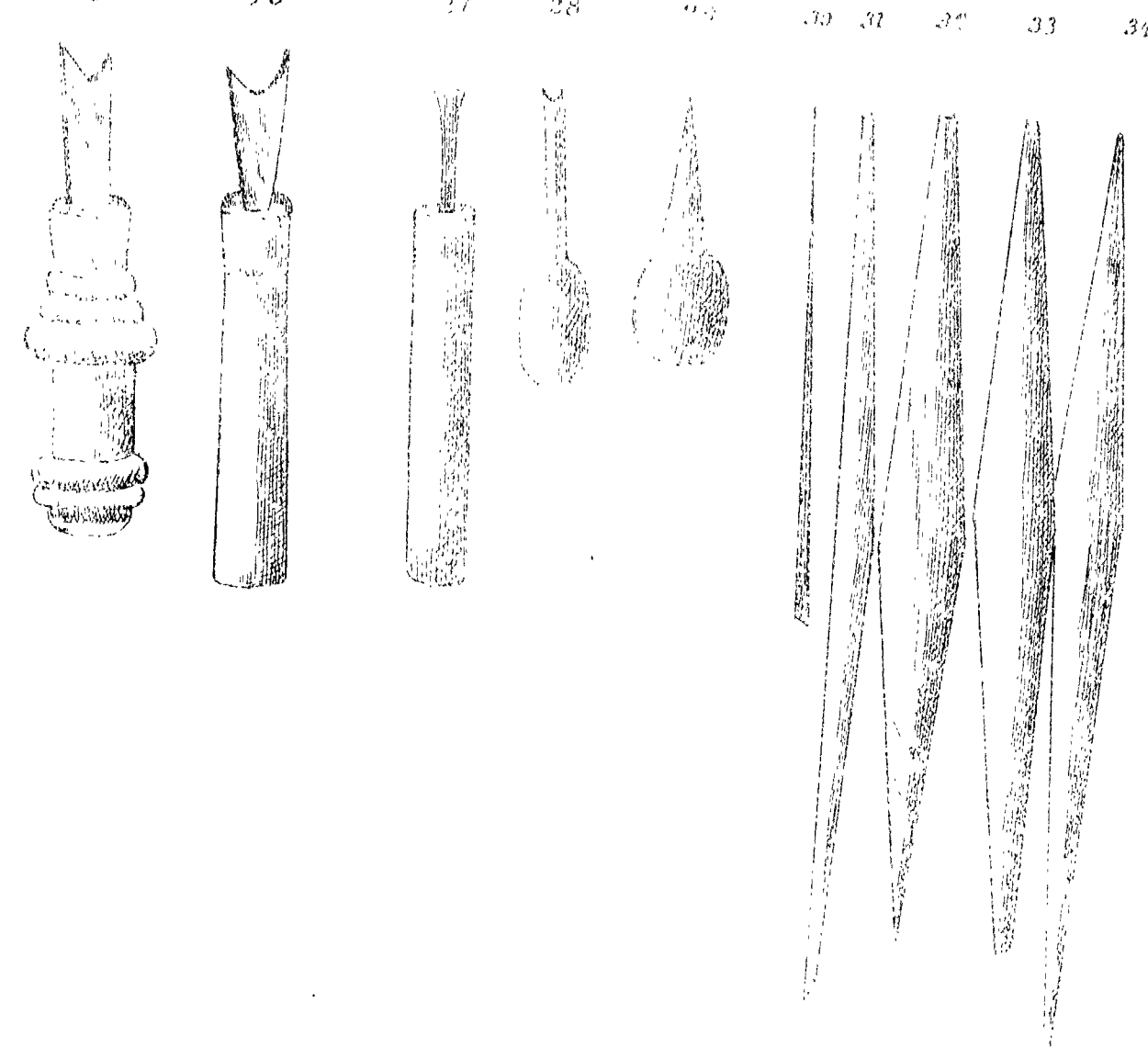
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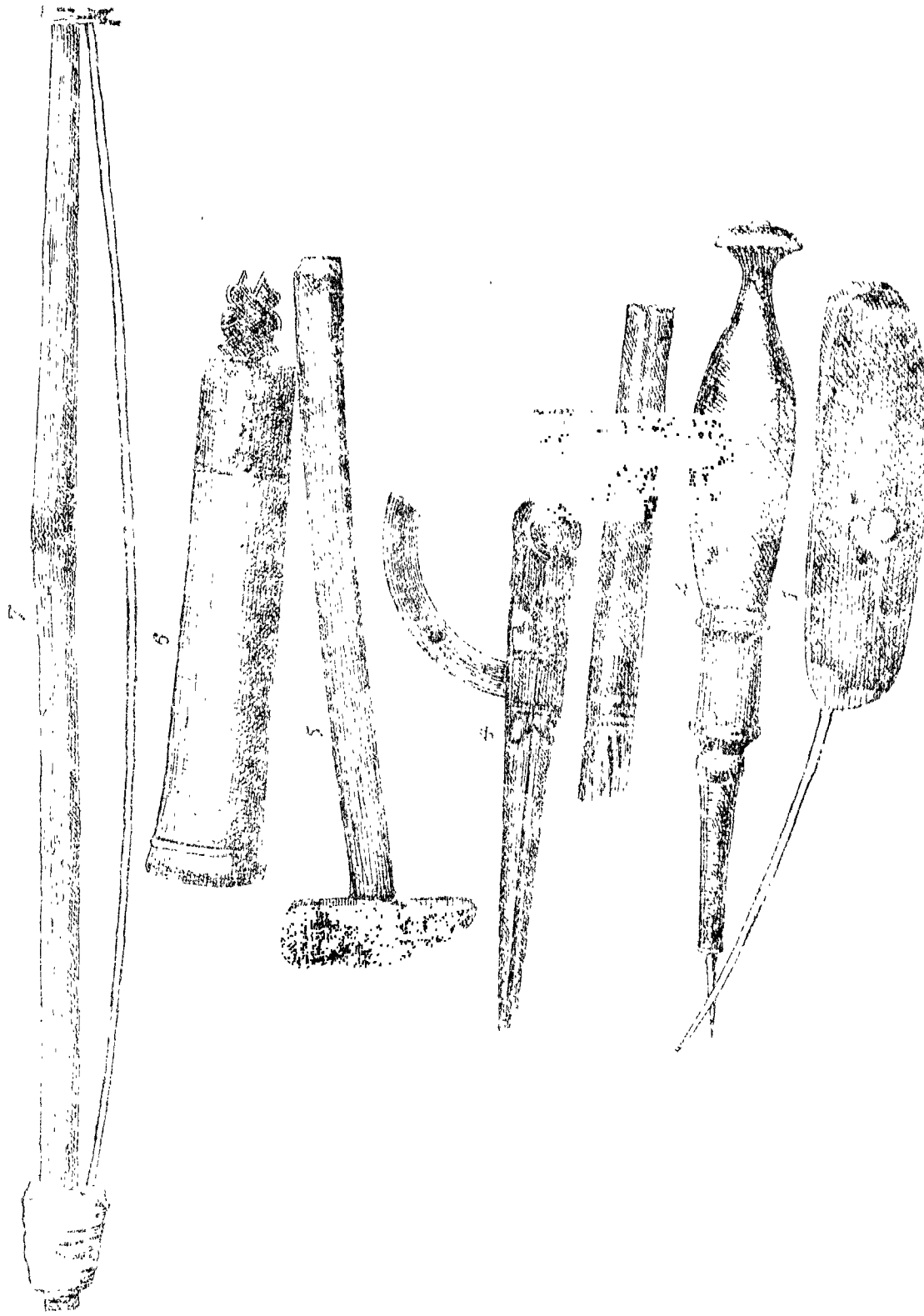
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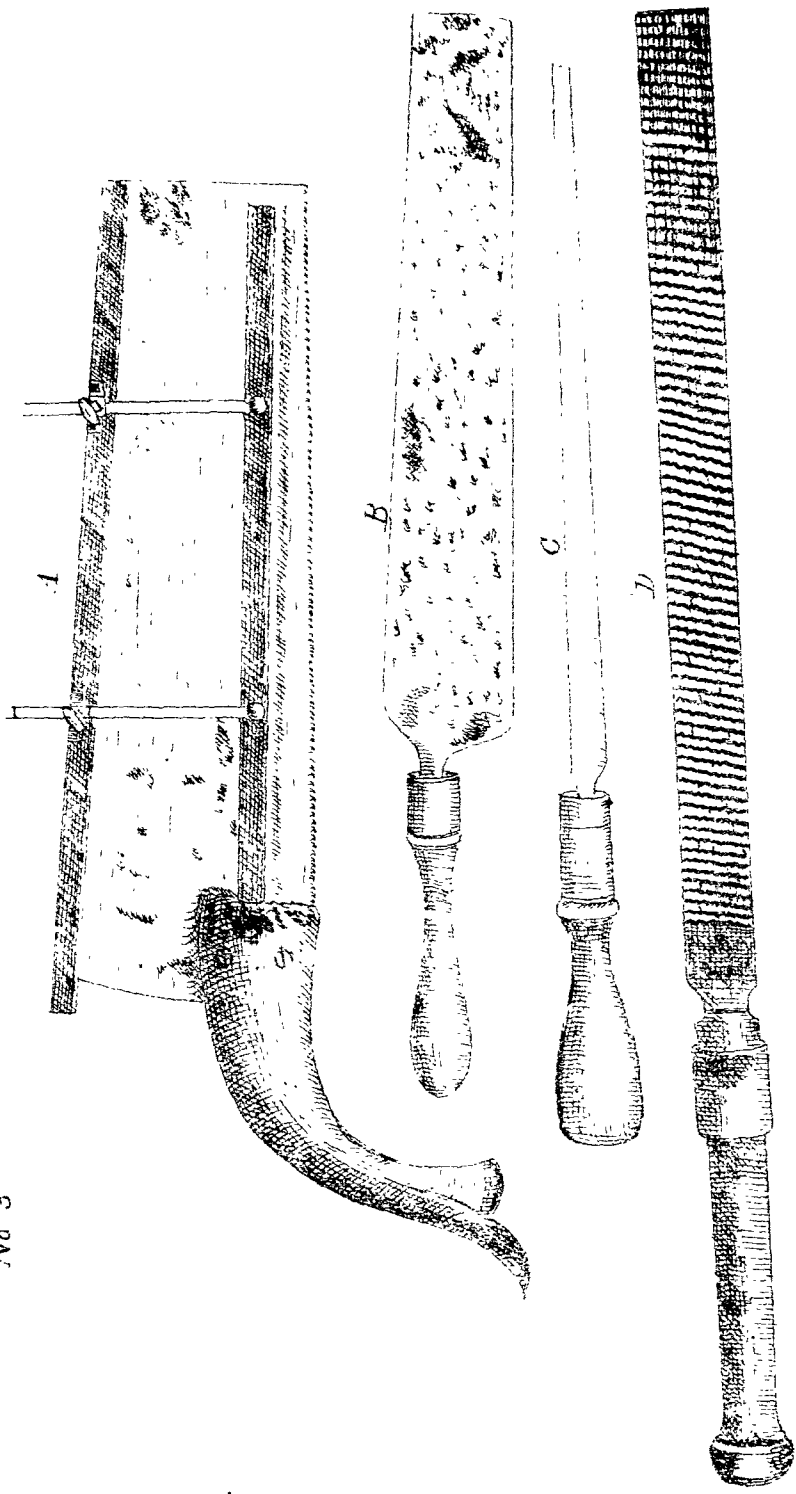
A3 2.



TOOLS FOR PERFORATION WORK, &c.

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|-------------------|-------------------|
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| 2. DRILL. | 6. COMPASS. |
| 3. KATHKASHI. | 7. BOW FOR DRILL. |
| 4. COMPASS. | |

No 3



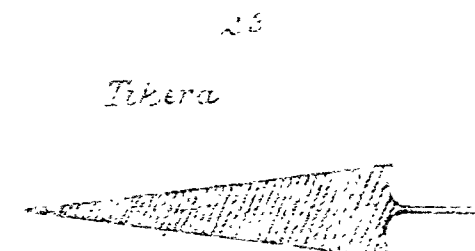
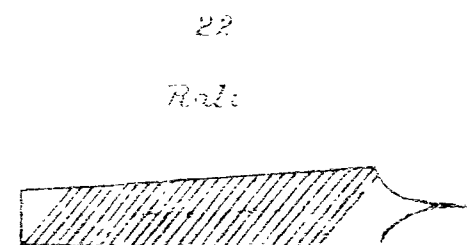
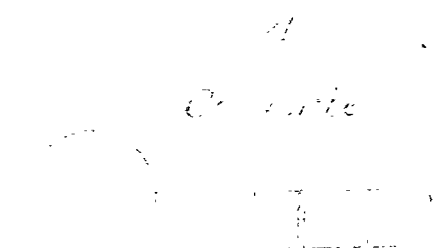
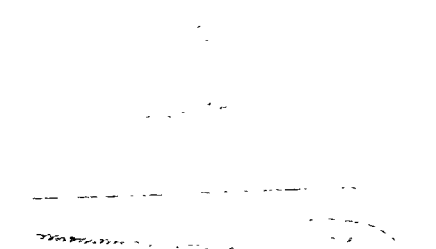
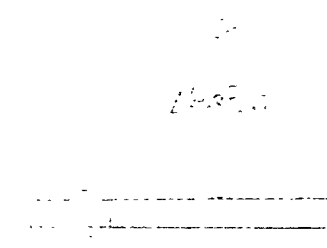
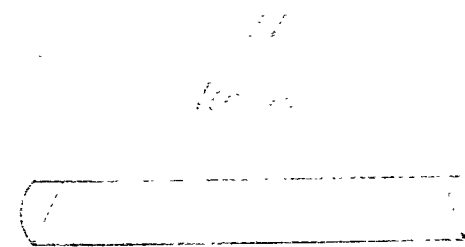
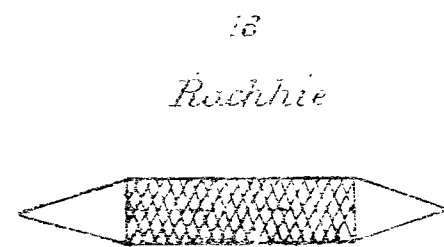
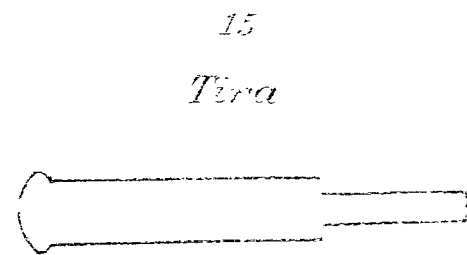
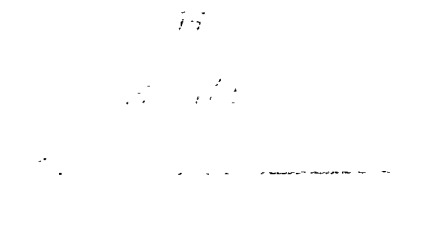
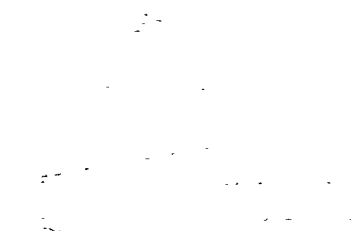
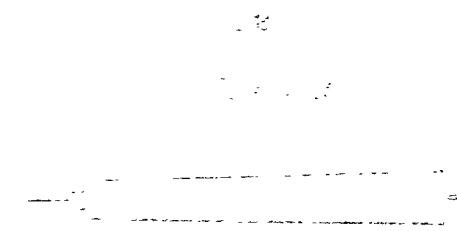
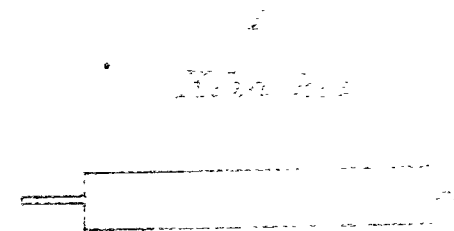
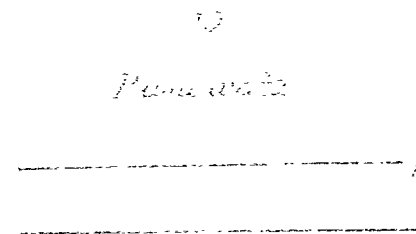
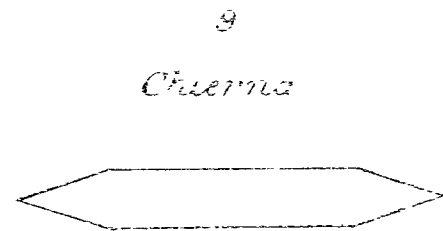
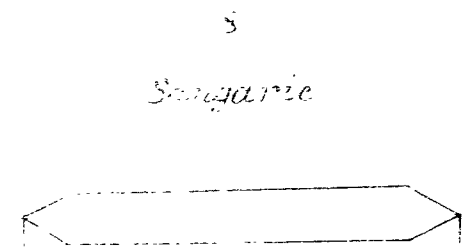
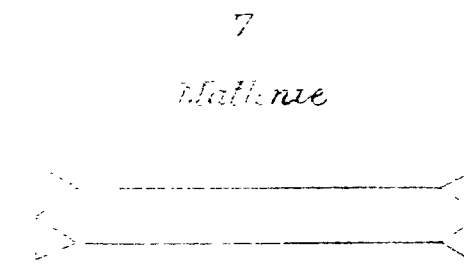
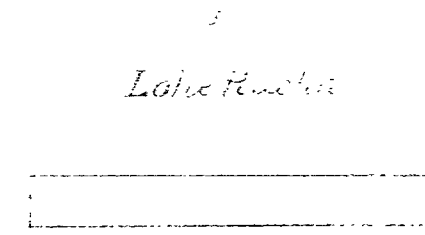
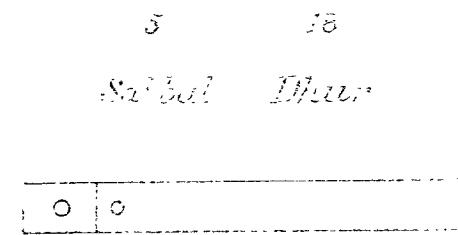
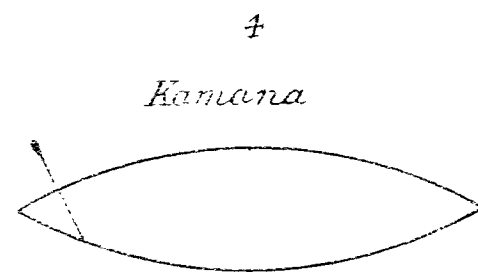
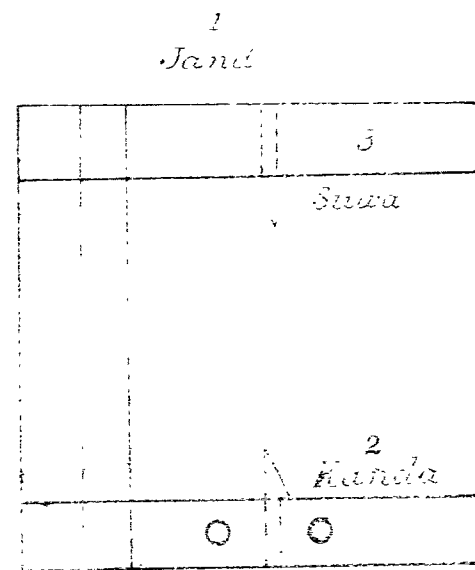
TOOLS USED IN COMB MAKING.

A.—ARI OF SAW.

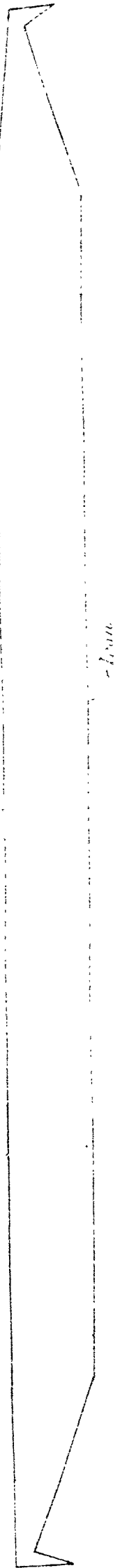
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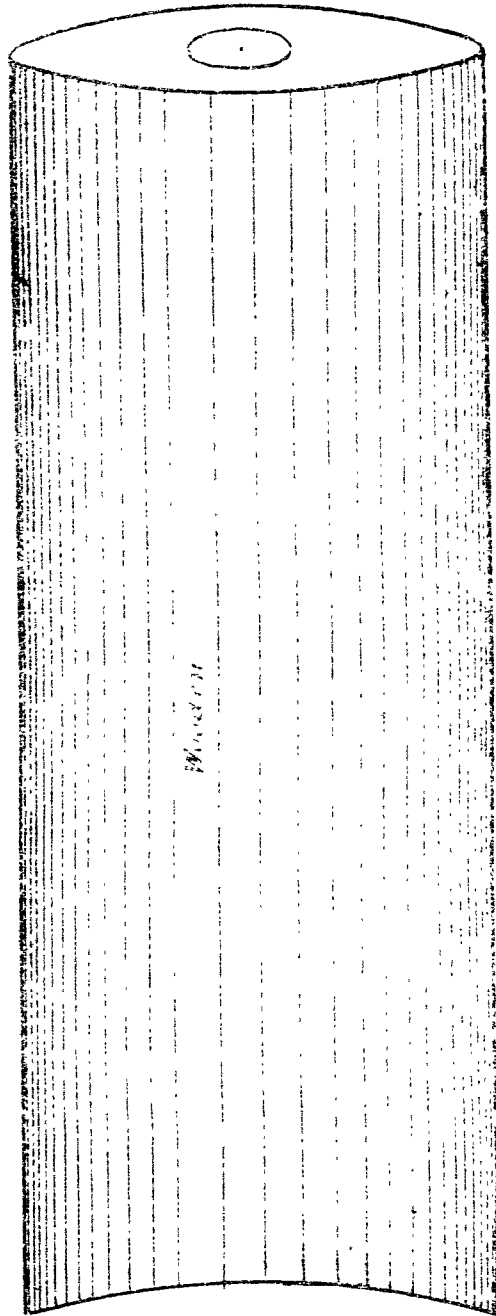


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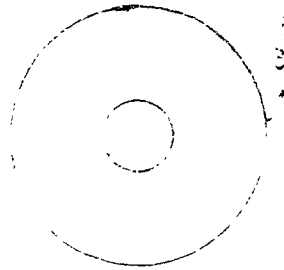
Wood

SABANA



Wood

SABIN



Stone

THE
FEDERAL
BUREAU OF
INVESTIGATION
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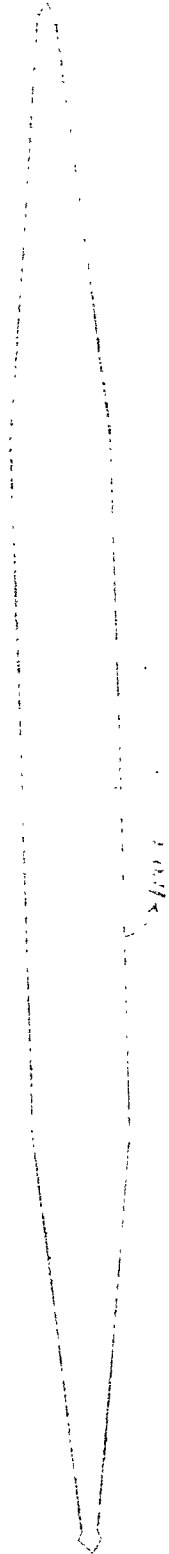
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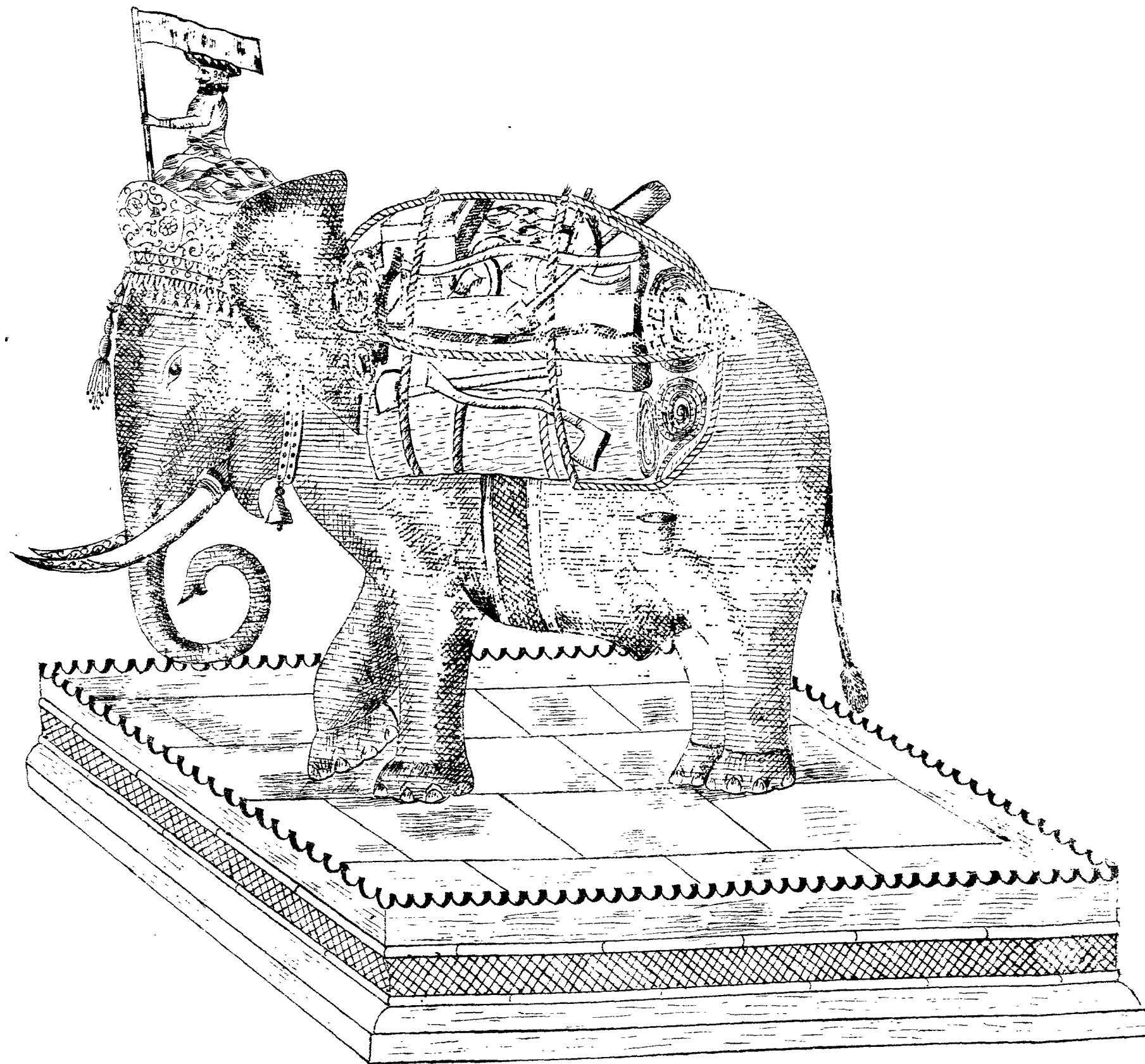


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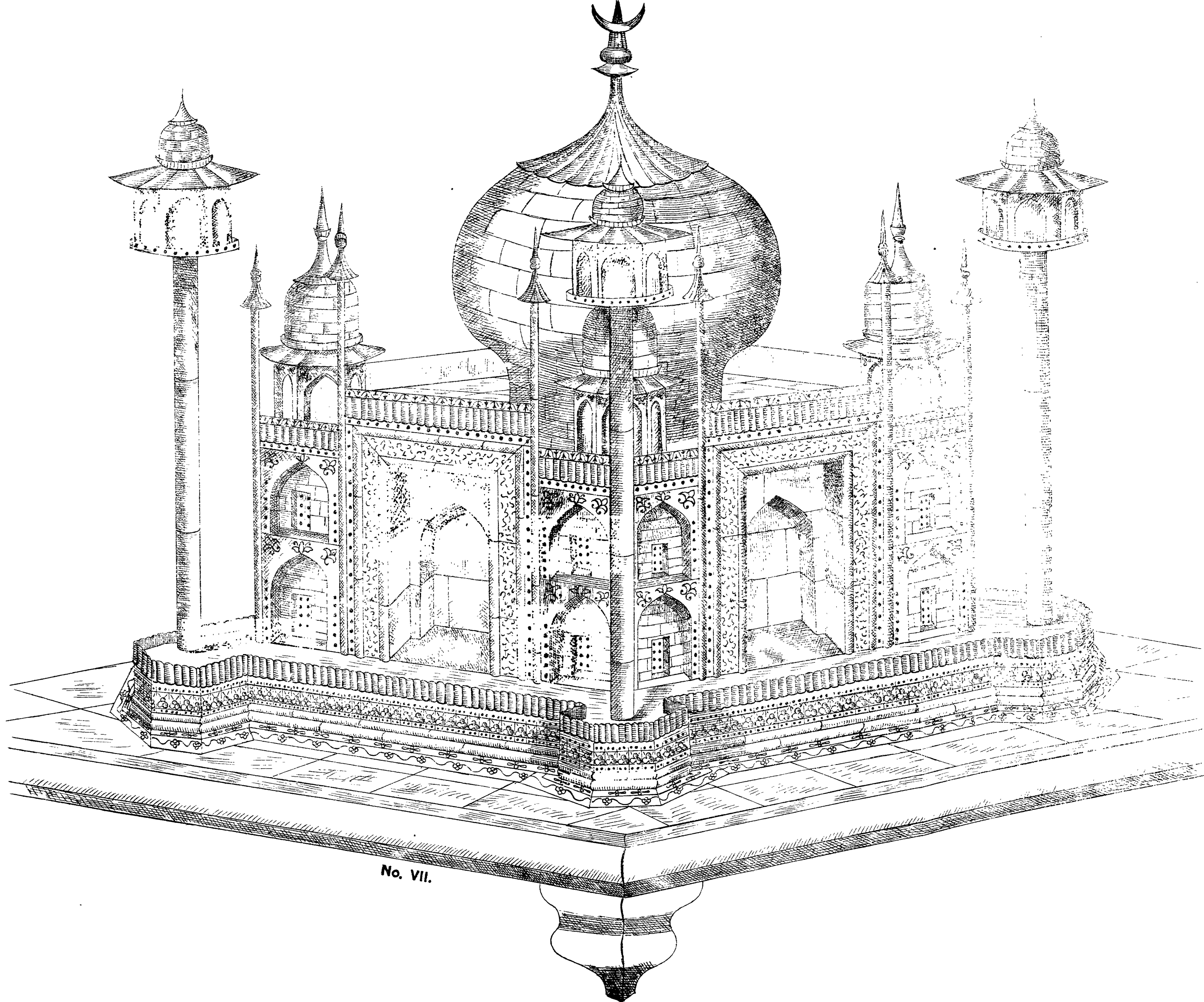


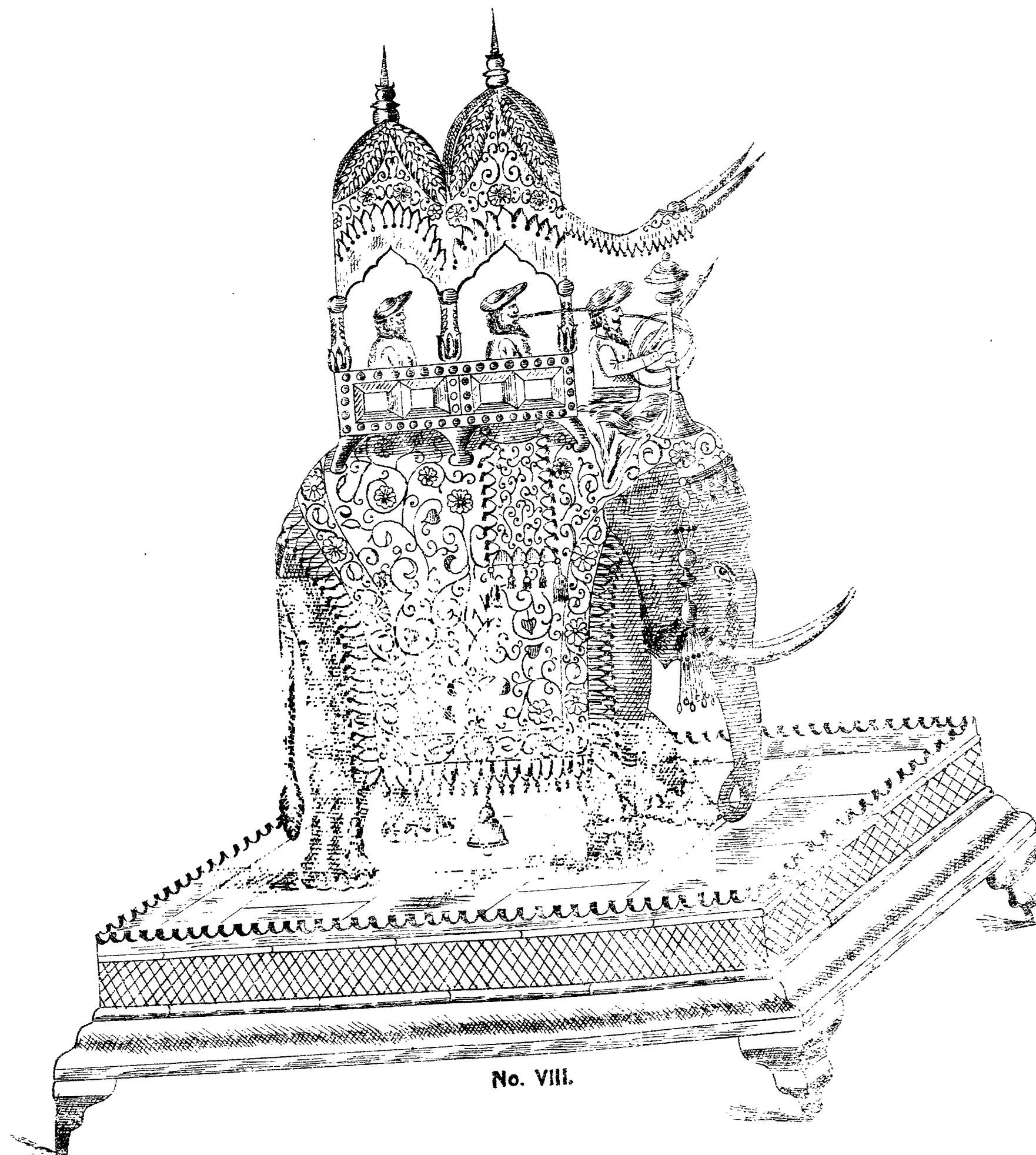
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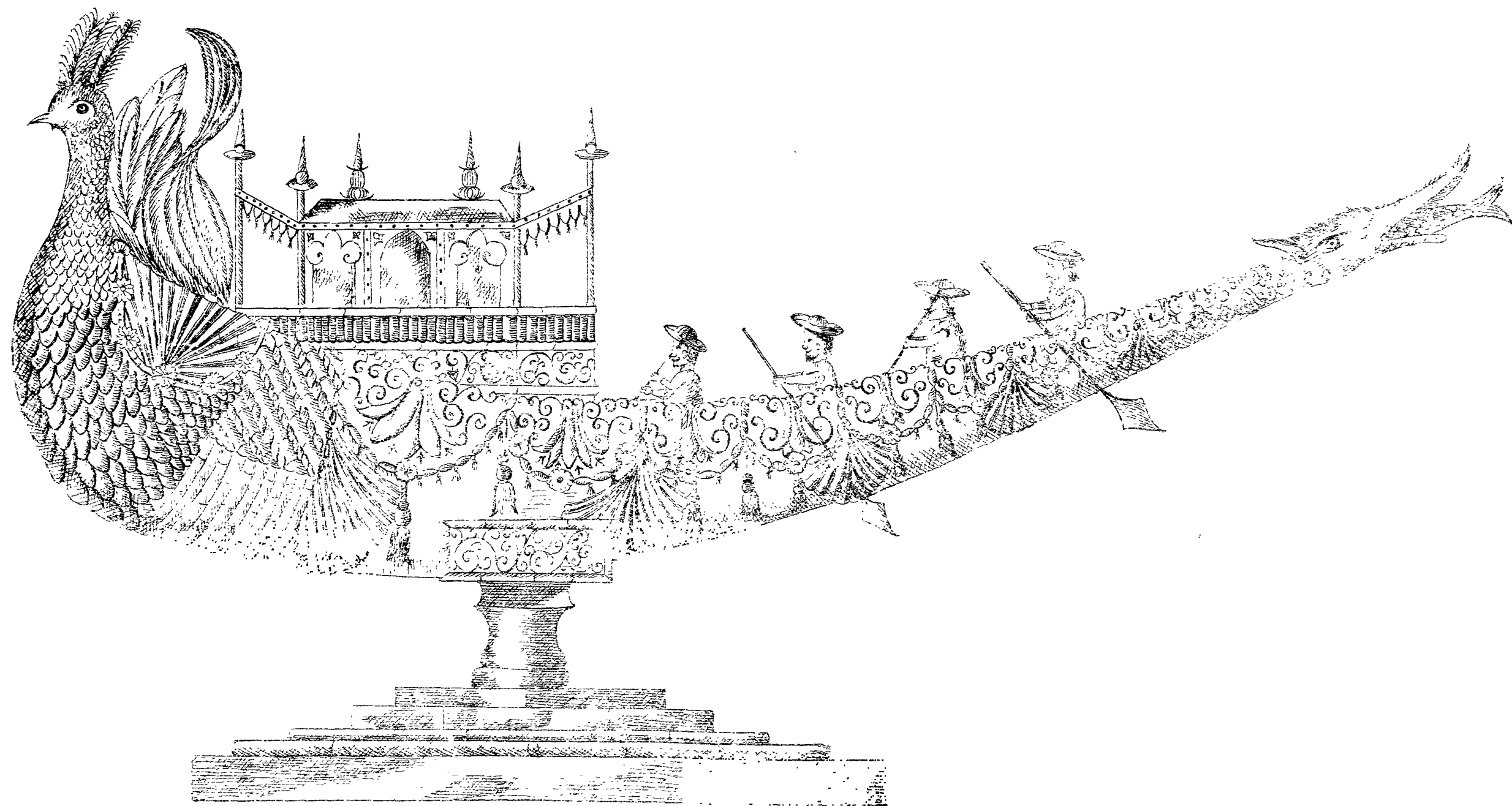
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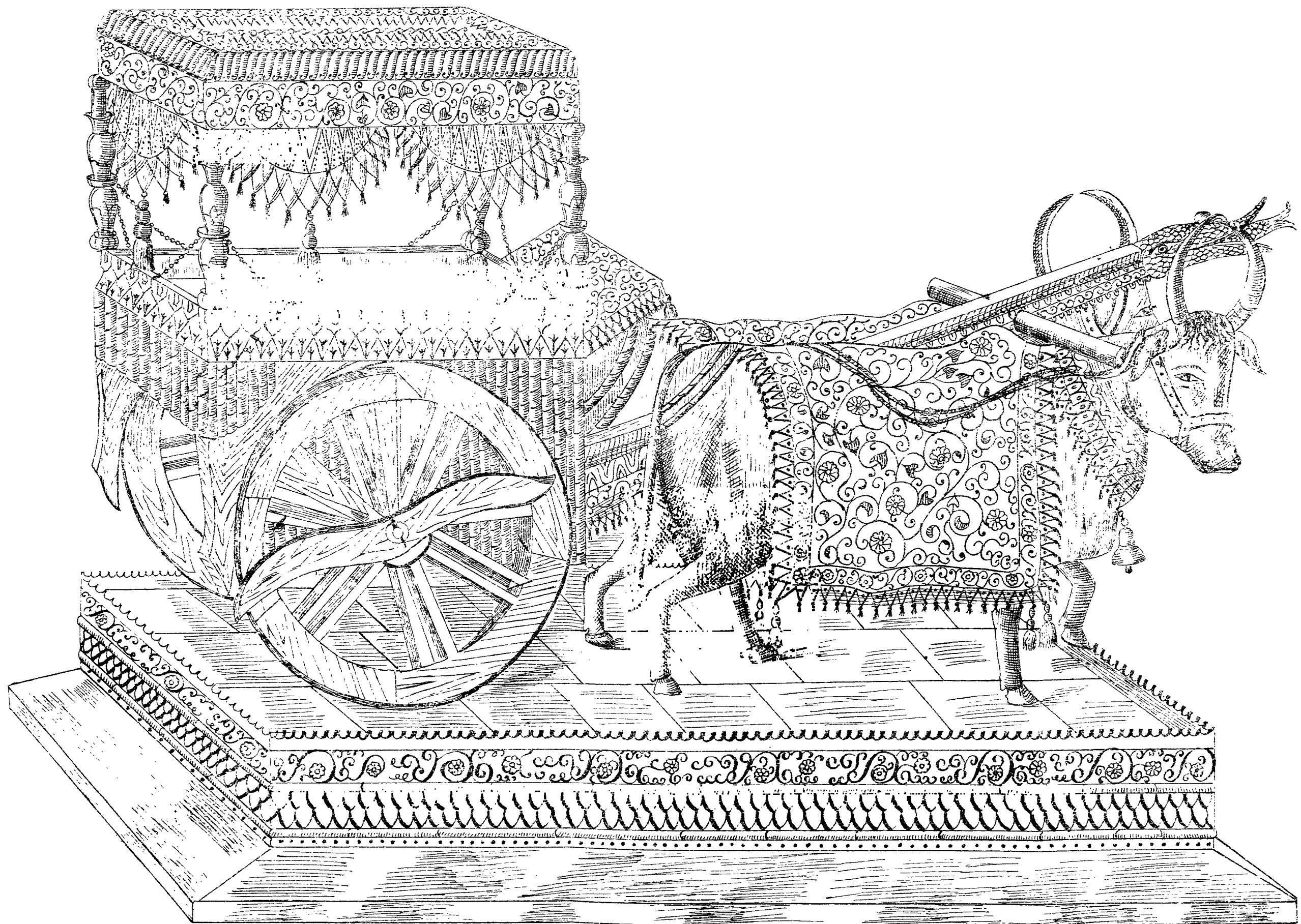


No. VIII.

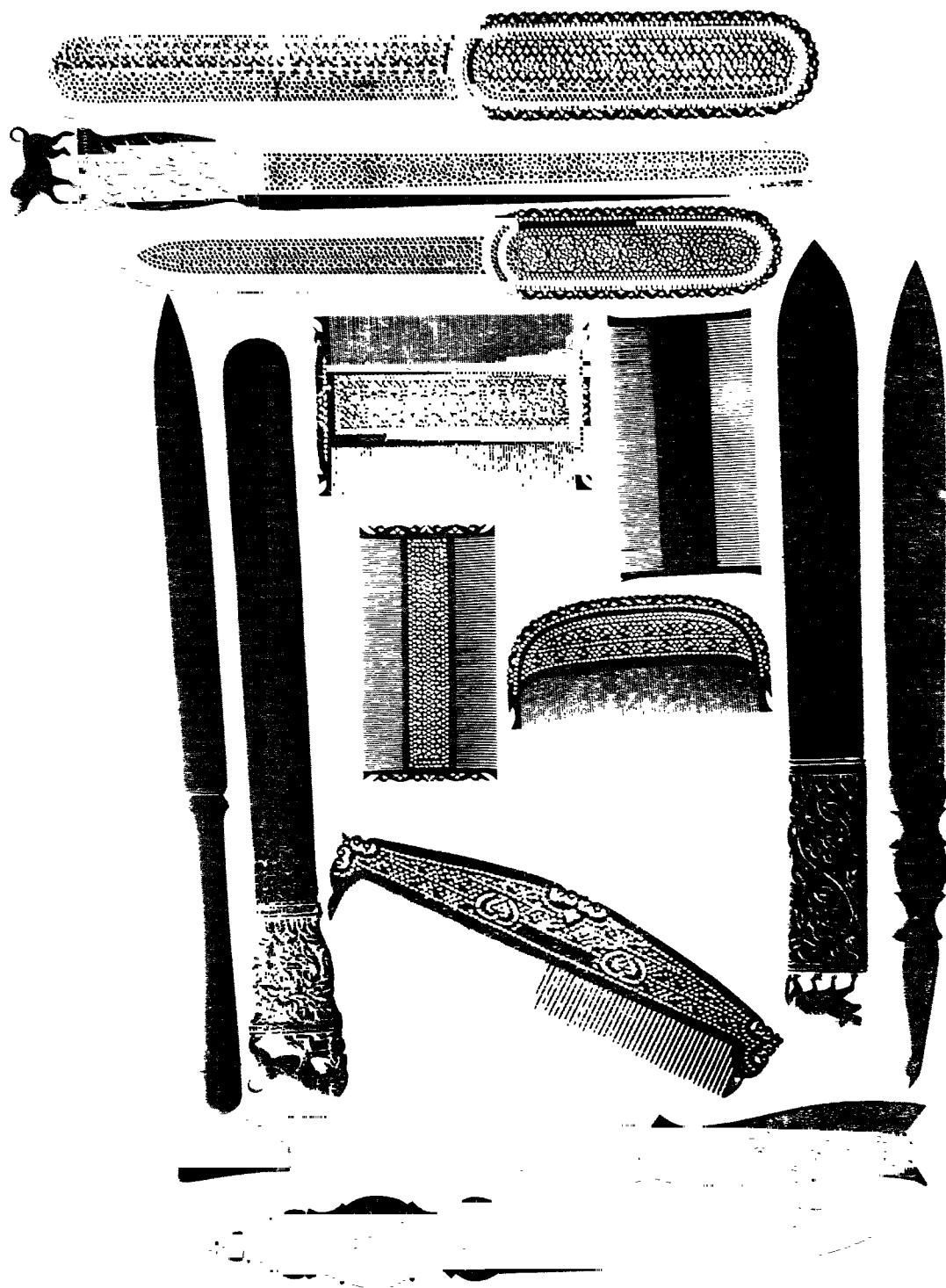




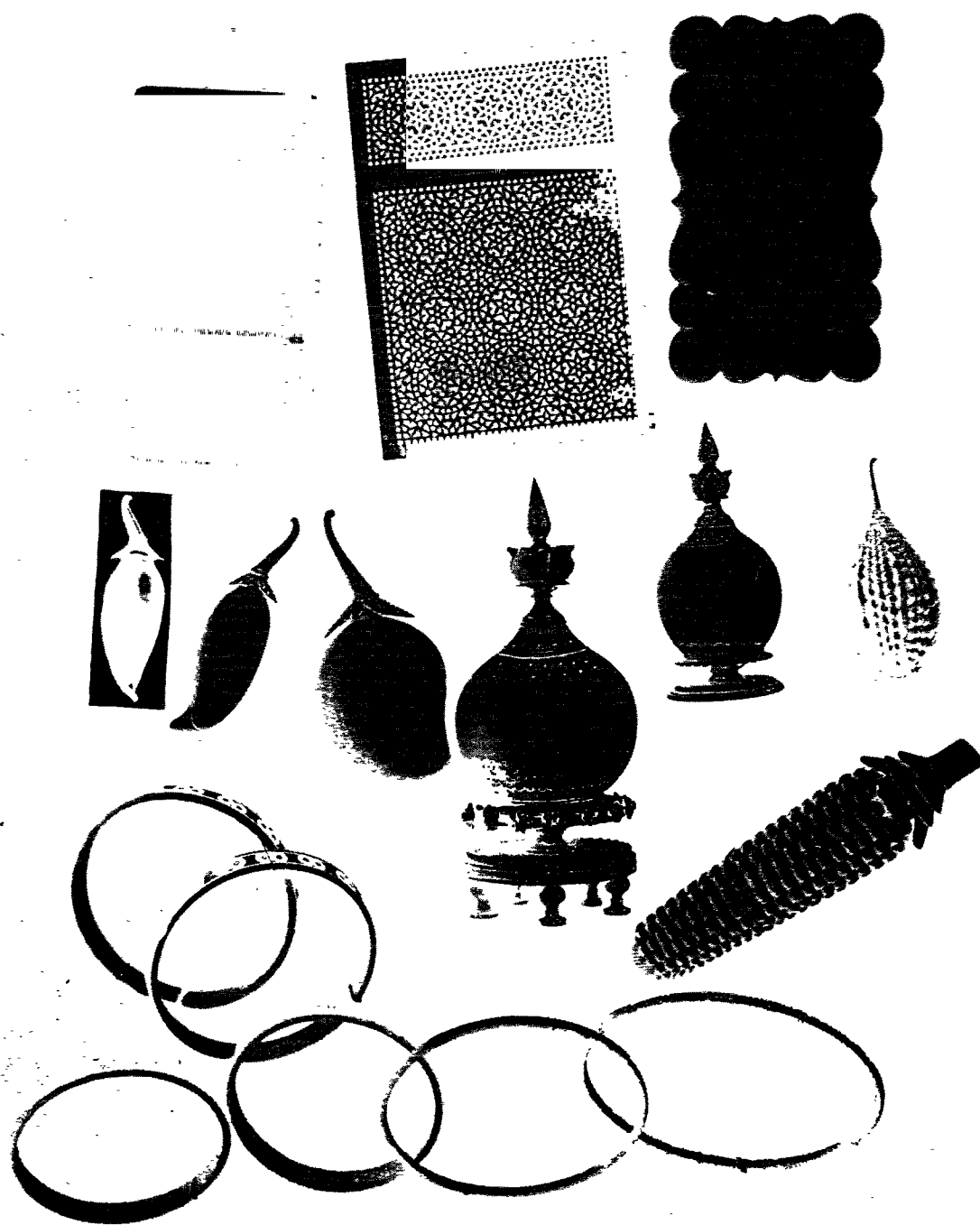
No. X.



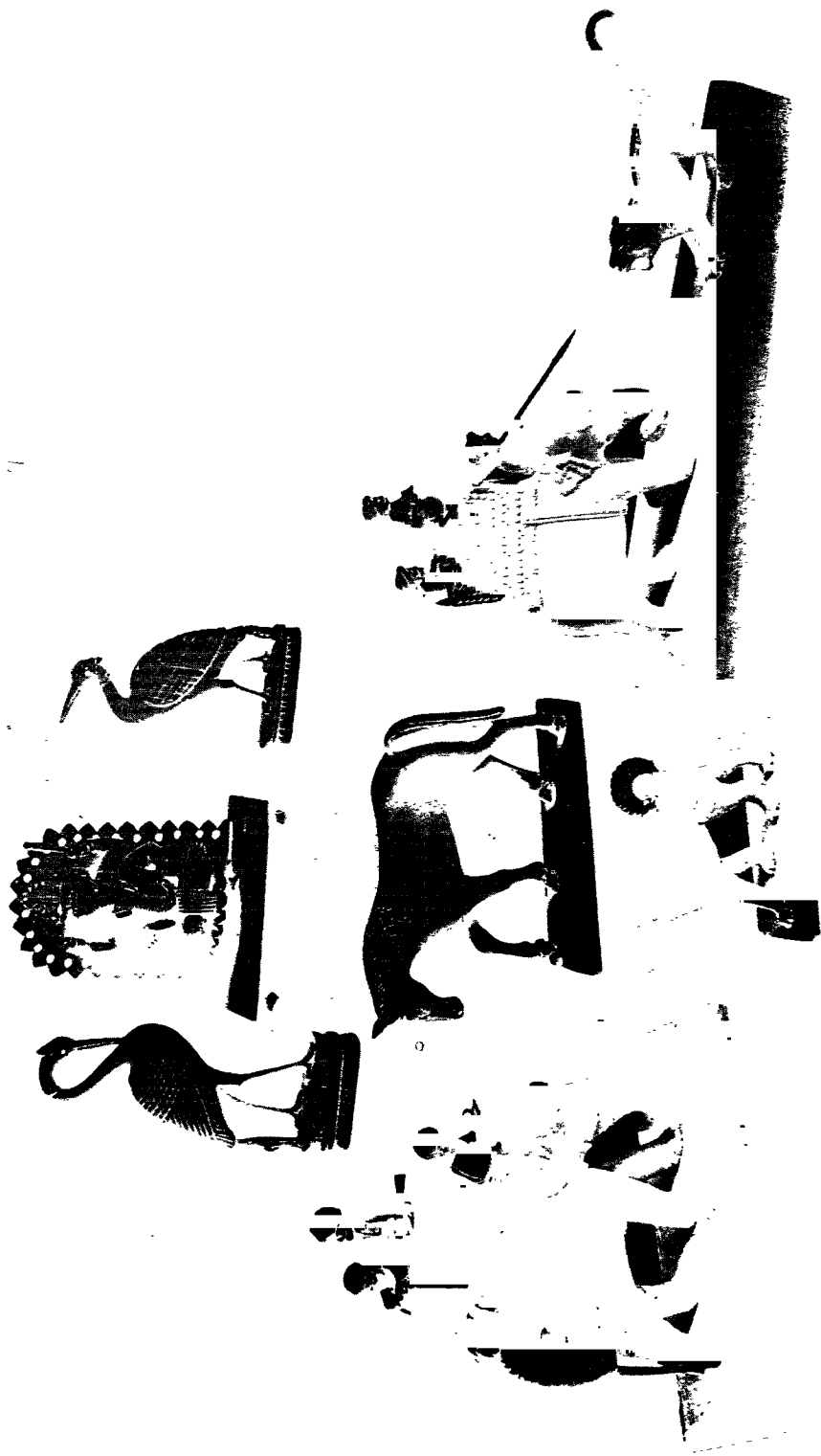
No XI.



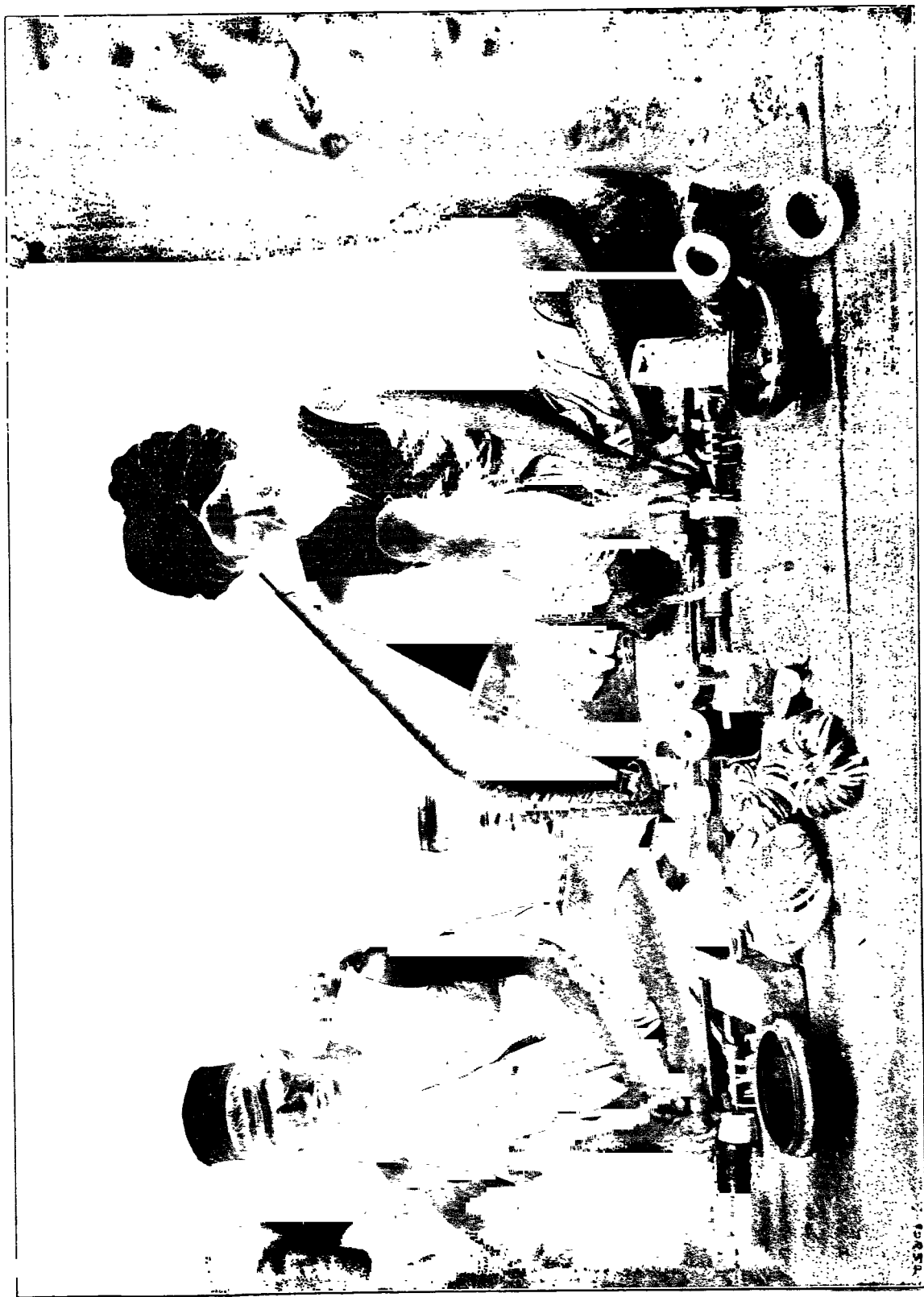
No. 12. COMBS AND KNIVES (AMRITSAR).



No. 13. SURMADANIS AND CHURAS (AMRITSAR).

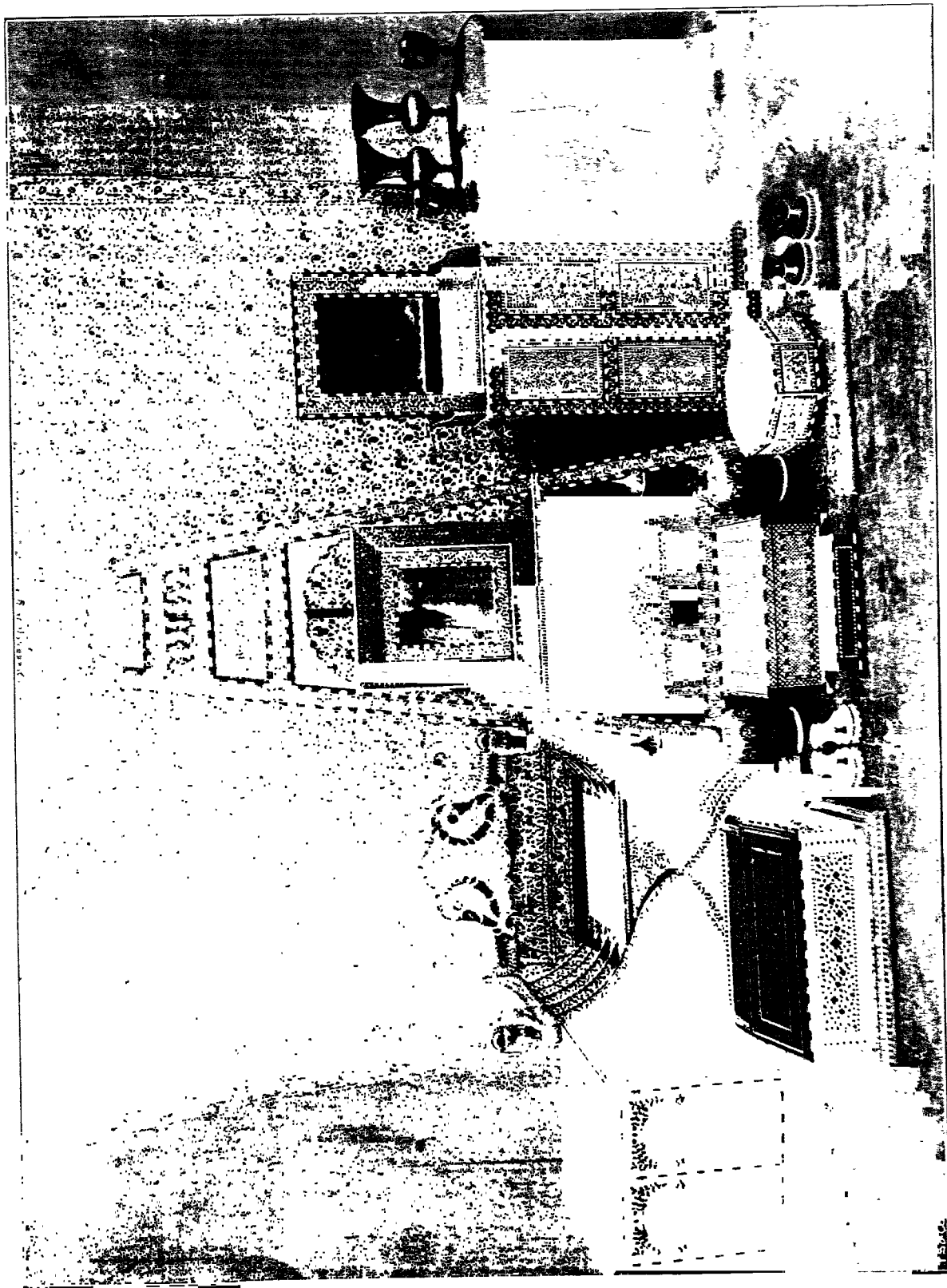


BUA No. 14, TOYS (AMRITSAR).



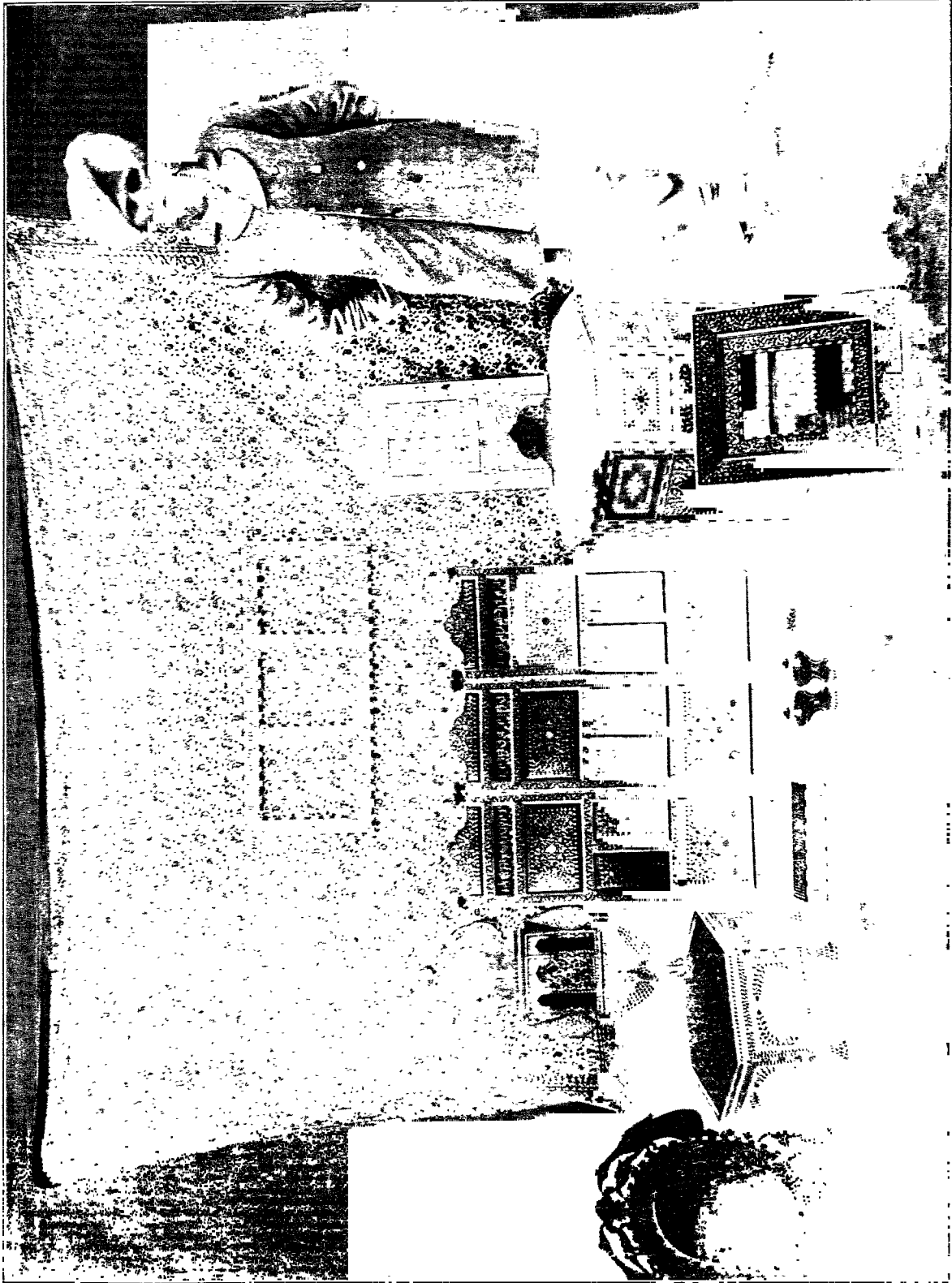
No. 15. CHURIGARS AT WORK (AMRITSAR).

Lathe used by Churigars showing the "Singari" severing the Rings or Churis.



No. 16. FURNITURE (HOSHIARPUR).

Square, Rs. 15. Chair, Rs. 35. Box, Rs. 8. Bed, Rs. 8. Bed, Rs. 8. Round Box, Rs. 8. Round Table, Rs. 8. Wooden Shoes, Rs. 2 per pair.



No. 17. FURNITURE (HOSHIARPUR).

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Octagonal Table, Rs. 20
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Bracket, Rs. 11
Chauki, Rs. 15

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